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Transactions of the 1984 Canadian Sport Fisheries Conference

Edited by:
A. L. W. Tuomi

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Comptes rendus de la Conférence canadienne de la pêche sportive de 1984

Rédaction:
A.L.W. Tuomi

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Transactions of the 1984 Canadian Sport Fisheries Conference

Canada's Sport Fisheries: Getting Ready for the 1990's

Vancouver, British Columbia
February 13-16, 1984

Edited by:

A. L. W. Tuomi

Department of Fisheries and Oceans
Policy and Program Planning
Ottawa, Ontario K1A 0E6

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A.L.W. Tuomi

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Abstract

TUOMI, A. L. W. 1985. Transactions of the 1984 Canadian Sport Fisheries Conference — Canada's sport fisheries: getting ready for the 1990's. Can. Spec. Publ. Fish. Aquat. Sci. 82: 338 p.

The conference was organized to serve as a forum for seeking consensus on overall goals and programs for Canada's sport fisheries for the 1990's. All major sectors of Canada's sport fish industry were invited by the Department of Fisheries and Oceans to participate and to outline their current policy positions, to identify key issues, and their expectations and aspirations for the future. Non-governent organizations made the opening submissions. Briefs by ranking national and regional angler organizations outlined the fisheries resource views and concerns of Canadian anglers and conservationists. Presentations were made on the growing development of ownership and management of fisheries by native people. Sportfish industry and tourism groups outlined their business interest in the $1.7 billion spent and invested in Canada in 1980 by five million Canadian and a million visiting anglers from other countries. In his speech, the federal Minister of Fisheries and Oceans said the time has come to manage and develop Canada's sport fisheries to their full economic and social potential. The ten provinces, the two territories, and the Department of Fisheries and Oceans, respectively, outlined their current sport fisheries policy, plans, and programs for the future. An intergovernmentally prepared draft of overall Canadian sport fisheries goals and programs was also presented and foreign perspectives on sport fisheries policy formulation outlined. Three panels dealt with sport fisheries development opportunities, resource use conflicts, and with the development and potential of native-owned fisheries. The conference overview drafted by a working group was extensively discussed and subsequently revised as a result. While there was consensus on most counts, conference finalization of inter-government/angler/industry sport fisheries goals and programs was not attempted for several reasons; notably, recognition of the wide scope and complexity of the subject, concerns expressed on how management problems arising from the *Fisheries Act* should best be addressed, and the need to both assess and build upon what the Conference had accomplished. Unanimous conference support was given to the conduct of the nationally coordinated 1985 Survey of Sportfishing in Canada. The announced intention of organized anglers to provide greater public input into fisheries conservation and management received broad approval. The scheduling of the next conference within nine months was also promised. The conference was the culmination of inter-governmental, angler, and related business community workshops and conferences dating back to 1970. These proceedings bring together an unprecedented and comprehensive foundation of information on Canada's sport fisheries and their future.

Résumé

TUOMI, A.L.W. 1985. Comptes rendus de la Conférence canadienne de la pêche sportive de 1984 — la pêche sportive au Canada : vers les années 1990. Publ. spéc. can. sci. halieut. aquat. 82 : 338 p.

La conférence a été organisée pour permettre d'en arriver à un consensus sur les objectifs globaux et les programmes concernant la pêche sportive au Canada dans les années 1990. Les principaux secteurs de l'industrie canadienne de la pêche sportive ont été invités à y participer par le ministère des Pêches et Océans et à exposer les grandes lignes de leur position sur les politiques, à identifier les questions-clés et à faire part de leurs attentes et de leurs aspirations pour l'avenir. Les premiers exposés ont été présentés par les organismes non gouvernementaux. Les principales associations nationales et régionales de pêcheurs à la ligne ont soumis le point de vue et les préoccupations des pêcheurs à la ligne et des partisans de l'environnement au Canada concernant les ressources halieutiques. On a fait état du nombre croissant d'autochtones propriétaires ou gestionnaires de pêches. Des groupes du secteur de la pêche sportive et du tourisme ont décrit leurs intérêts dans les dépenses et les investissements de 1,7 milliards de dollars effectués au Canada en 1980 par 5 millions de Canadiens et 1 million de pêcheurs à la ligne venant d'autres pays. Dans son discours, le ministre des Pêches et des Océans a déclaré qu'il était temps de gérer et de développer la pêche sportive au Canada selon son plein potentiel économique et social. Les dix provinces, les deux territoires et le ministère des Pêches et des Océans ont respectivement exposé leurs politiques, leurs plans et leurs programmes actuels relatifs à la pêche sportive pour l'avenir. Une ébauche préparée par les divers gouvernements sur les objectifs et les programmes globaux touchant la pêche sportive au Canada a également été présentée, et l'on a fait état des perspectives d'autres pays sur l'élaboration des politiques en matière de pêche sportive. Trois comités on traité des possibilités de développement de la pêche sportive, des conflits relatifs à l'utilisation des ressources, de même que du développement et du potentiel de la pêche des autochtones. Le compte rendu général de la conférence préparé par un groupe de travail a suscité beaucoup de discussions et fut modifié ultérieurement. Bien qu'il y ait eu consensus sur la plupart des sujets traités, on n'a pas tenté de mettre un point définitif aux objectifs et aux programmes

concernant la pêche sportive présentés par les gouvernements, les pêcheurs à la ligne et l'industrie, et ce pour plusieurs raisons, notamment, la reconnaissance de la portée et de la complexité du sujet, les préoccupations exprimées quant à la façon dont on devrait traiter les problèmes de gestion soulevés par la Loi sur les pêcheries et la nécessité à la fois d'évaluer la conférence et de développer ce qui y a été réalisé. La conférence a appuyé de façon unanime la réalisation de l'étude de 1985 sur la pêche sportive au Canada, coordonnée à l'échelle nationale. L'annonce de l'intention des associations de pêcheurs à la ligne de tenir davantage compte de l'avis du public en matière de conservation et de gestion des pêches a été largement approuvée. On a également promis de tenir la prochaine conférence dans les neuf mois. Cette conférence représentait l'aboutissement des ateliers et des réunions tenus par les divers gouvernements, les pêcheurs à la ligne et les milieux d'affaires de ce secteur depuis 1970. Elle a permis de rassembler une base de renseignements exhaustive sans précédent sur la pêche sportive au Canada et sur son avenir.

PROVINCIAL WELCOME

Ron Thomas

Chief of Fisheries Management, British Columbia

on behalf of

Ben Marr
Deputy Minister of Environment, British Columbia

Ben asked me to tell all of you that he regretted not being able to be here today. Ben also gave me some speaking notes that I intend to read. From me, personally, welcome to this meeting. It's the seventh that I have been to, and there has only been seven.

It's my pleasure to welcome you to British Columbia today for the fourth Canadian Sport Fisheries Conference. A great deal of progress has been made since a similar meeting to this was held in Victoria in 1972. It seems appropriate that this very important meeting be held in British Columbia as we have by far the largest salt water fishery in Canada and rank third in participation in freshwater fishing. The Provincial Ministry of Environment has recognized the need for a comprehensive assessment of natural resources and the development of long term plans for their use. Information acquired through the National Sportfish Surveys in 1975 and 1980 has been of tremendous value to the development of these plans. Ironically, only Fisheries and Wildlife have adequate data on which to base plans. The water people, the waste people, the air people do not. Like most jurisdictions in Canada, British Columbia is facing a serious problem in freshwater fisheries as well as salt water, as the demand for angling opportunities far exceeds our natural capability to produce fish. One of the perennial problems we face is convincing a wide variety of people, including legislators of the real value of sportfishing. I therefore urge you during your deliberations here to not only strive for the development of national goals for sportfishing in Canada, but to try and reach agreement on acceptable methods of valuation of sport fisheries. I hope you conference is successful and that you all enjoy your visit to Vancouver and to British Columbia. Thank you.

KEYNOTE ADDRESS

Victor Rabinovitch
Assistant Deputy Minister

Fisheries Economic Development and Marketing
Department of Fisheries and Oceans

We were talking some weeks ago, about the difficulty of starting off a conference of this kind. I was told my role as a keynote speaker is like that of a bugler, to sound the attack, or like a bugler, if need be, to sound the retreat. And I began to worry, because in fact I used to be a bugler. Anyone who used to hear me at 6:30 in the morning would know how much I really resented waking up at ten after six and going out rain or shine and sounding the call. More to the point, as public servants, we know that really it is the elected people, either individually as ministers or collectively as a government, who issue the marching orders and it is our job as public servants to give advice, to try to persuade, but basically in the end to listen and to do what the elected people tell us should be done.

To get back to the theme of the conference, and what we are here for, I really am the new boy on the block. This is my first conference, and I am fairly new to the federal public service, but in a sense it may be an advantage because I can sit back and perhaps make observations as how I see things from the standpoint of someone on the receiving end of information -- or advice that is intended to persuade me, or intended to persuade me to persuade a Minister, to do something. My first observation is on how positive the information that has been developed through these conferences, and through the efforts of the provincial governments and the federal government through those surveys, has been in developing the information base that has established the case for the sport fishery as a major area of activity. From the sport fishery surveys, I've gathered information about the numbers of Canadians who participate in the sport fishery, the numbers of foreigners who come and spend their tourist dollars here, and about the days of activity enjoyed by all sport fishery participants. Obviously I have gathered information on dollars spent, both direct and indirect, on goods and services. And most important for myself, in the generic promotion of fish as food, I've gathered a lot of very interesting information about the amounts of finfish that are consumed by sport fishermen, their friends and their families, and what this might mean to us as to the market, the potential market, that is there among sport fishermen, their friends, their families, and their neighbours for fish products more broadly.

I guess what I'm saying about those surveys is that they aren't just another survey, another pile of raw data to be put in the corner. These data have established the claim of the sportfish industry to being a major participant in economic activity and therefore having a legitimate claim, a very legitimate claim, on sharing of the fisheries resource. Obviously, my remarks mean that the 1985 survey is obviously going to be vital, that no one should say, well, we've done two, what do we need any more for? We've made our case. But it isn't simple, as most of us know, so that 1985 survey clearly will remain a major focus of activity for the people around the table here and the people who observe the results of these discussions. But having said that about the

surveys, and the discussions around the surveys, the fact remains that there are a number of important arguments - with the most important one being the economic one. There are a number of arguments with respect to comparing the sport fishery to the commercial fishery. The argument, for example, about the potential rents. The argument being that, theoretically at least, the sport fishery should be able to produce greater net economic profits, or net social rent, than the commercial fishery. It is a great argument. It will certainly keep a lot of university types, and the types of people who get consulting contracts from us, occupied for some years to come, which is a good thing. I would question, however, whether it will ever result in an answer that will solve once and for all the dilemma or the problem of what produces greater value to society of a whole, the sport fishery or commercial fishery. Because ultimately it is a theoretical argument until the day comes that we are prepared to say we are going to have an auction war, to see who is going to pay for what. We can turn to another type of question. Why don't we compare the person years of employment generated by the commercial fishery as compared to the sport fishery. That is a more easy one to deal with because you can ultimately measure to some degree of confidence the employment level directly attributable to one part of an industry or another part. But even there there are so many problems of methodology and measurement. We might try it a different way. We might ask ourselves what about the economic activity, measured whether in a tax dollar or measured in cash flow, for actions taken directly on the sport fishery and the commercial fishery plus the horizontal linkages and the vertical linkages. And while we can go through that argument in great detail, methodology and problems of measurement will ultimately lead us up against a blank wall. Elasticity of demand would be a great one to discuss, as to whether more fish available to the sport fishery would result in that many more people entering the sport fishery and spending that much more money - or have we in fact reached a certain peak of demand and a certain peak of participation?

I guess what I'm trying to say is we can discuss the broader question of the generation of wealth and its distribution onwards and onwards, and each round of discussion brings us further in our understanding and what is useful. I'm a professional economist by training, and of course I believe it's useful. But, in the end, decisions about the future of the sport fishery, its role and its size and its relative share will not be resolved totally by economic discussions. I guess firstly, it's because the sports fishery is not just an economic activity. And I suspect that the term recreational fishery is really a better way of describing the activity. When they are describing snorkeling, watching fish, whale watching, or whatever, yes, that is a part of sport fishing, that is a part of the wildlife experience. I'm compelled by this because I think that the future of the sports fishing industry broadly is going to rest in the ability of people here to see the industry more broadly. Let me explain what I mean. I used to be a private sector lobbyist. I learned when I would go to governments, provincial or federal, that if I came forward and just said, "my people want something, give us, give us, give us", that we didn't get too far. We might get a sympathetic hearing, and very often we got some very good press coverage for a day or two, because there is nothing like the press focusing on a little bit of conflict. But I was most effective as a lobbyist when I would come forward and say, here is a commercial problem, here is what we think about that problem and here is our proposal for dealing with it. And yes, part of our proposal involves us getting a bit more, but please don't think that is the only thing we are interested in. Ministers and governments generally are most interested in hearing about a problem when it is placed in a

broader context. What does this mean for a sport fishery conference? I suppose I'm suggesting that while the economic arguments are important, let's not merely get caught up in the economic arguments. There is more to it than that. I personally found the document, Key Areas For Program Development, which is going to be one of your discussion documents, highly compelling because as I read through it a picture emerged in my mind of the sport fishery as part of the fish industry broadly, and sport fishery managers as looking at how the activity can be enhanced and broadened, so it becomes more than taking away from this group or that group or any such crude pie cutting. What I really got out of it was the concept of an industry, broadly speaking, looking at how it could develop as an industry, and as part of a broader sector. If I sound any note, let it be the note that I would like to see, the sport fishery accept right now that it is legitimate, that it is part and parcel of the fishery sector, and that it has established it's legitimate place. The surveys have done it, these discussions have done it, and now it's time to get on with the job of saying: how do we maximise economic benefit, social benefit, overall society benefit from the recreational fishery? How to do it? How do we get on to the nitty-gritty of improving things, getting on and broadening them? It seems to me, that is what really has to come out of these conferences. On that basis, on the basis of confidence, and feeling secure on that basis, issues such as allocation will get resolved very positively, very constructively. That is the note that I would like to sound, Mr. Chairman. I'd sound a second note and express my personal recognition for the work done by you with the provinces, and various private organizations in creating greater professional, political, and commercial recognition of this part of the fisheries sector. It is a real tribute to you and your colleagues.

CONFERENCE PROCESS

Archie Tuomi

General Chairman, Department of Fisheries and Oceans

Before starting to talk about the conference process, and referring to introductions, I am not going to try and recognise everyone here because everybody is at the head table as far as I am concerned. But I would like to identify some of the people from outside of Canada.

As you can see from the participant list, we have Dr. Bob Hutton, the Constituency Affairs Coordinator of the National Marine Fisheries in the U.S.; Gil Radonski, President of the Sport Fishing Institute; Richard Thompson, Recreational Fisheries Coordinator from the Northwest Region in Seattle. Sitting next to Dr. Thompson is Alec Merriman from Victoria. That is practically out of the country; Mr. Michael Leech, Assistant to the President, International Game Fish Association from Florida. Finally I'd like to welcome a biologist from Trondheim, Norway, Svein Mehli, who a number of us had the pleasure of meeting for the first time in Norway in 1975.

Now with respect to the conference process, you have received so much literature that I don't have to repeat why we are here except to say that this is a very ambitious undertaking, in the sense that we've lifted up our sights considerably from what we have attempted at previous conferences. Any credit in getting this thing rolling, has, of course, to go to the whole network of provincial and federal colleagues across Canada who have attended these conferences and have worked so hard. However, there are three things to be done here. We'd like to identify and reach a consensus on a set of goals for Canada's sport fisheries going into the 1990's. That does not mean unanimous agreement, but at least, a consensus on what we can agree on and agreement as to what to do with what we can't agree on. We also want to identify, to the extent possible, all the government, user and private interest programs that are in place or required to work toward these goals. And finally, as a third step in the process, we'd like to get something moving, or at least seek an agreement and get a commitment to do something that goes beyond what happens in this room, in effect, a commitment to the future.

Now with respect as to how we are to do these things, I think success first of all is going to hinge entirely on the efforts of everybody here. All of you are privileged and have the responsibility -- and I would suggest some of the accountability -- for getting results by identifying goals, programs and the processes required to chart the future. In this respect, there are four things to bring to your attention.

First is the good news: a lot of the ground work has already been done. Our colleagues from the Canadian Wildlife Federation have produced a number of papers that have identified goals, interests, and aspirations and some of the steps that they see as required. Our industry people have in their various presentations indicated the same in the way of goals and what they see as needed in the future. And in the intergovernmental paper and spreadsheet, you have an initial consensus with respect to how governments view the future in terms of the ten goal and program areas identified on that spreadsheet. If you have not seen the spreadsheet, I would suggest you have a good look at it and, if you feel you can improve on it, blank ones are available.

Second, what we need to do here is to translate this material that's on paper into a sense of commitment to getting something done. A lot of us are meeting each other for the first time here, and I think that as partners in this whole industry, we have to get to know each other. We have to get to know each other's language and make judgements accordingly.

Thirdly, we have to learn to work together. To a large extent, the program is designed to facilitate this. Today, we are going to hear non-government interests make presentations outlining their visions of the future. Tomorrow, it's the turn of governments, to put their positions forward. Thursday, we are going to explore three issue areas that will enable us to check out how we are doing and explore the nuances involved in arriving at agreement on goals and programs.

Fourth, we are not going to leave arriving at a consensus entirely to chance. I'm asking the following people to volunteer to serve on a working group that will listen carefully as to what's going on, rewrite and edit the goals as they see them, and then to report back on Thursday as to what appears to be an acceptable consensus. And the "volunteers" that I've identified include: Ken Loftus of the Canadian Wildlife Federation; Roger Liddle of the Northern Ontario Tourist Outfitters; on behalf of governments, Ron Thomas from British Columbia, Bob Wowchuk, from the Pacific Region of DFO, Dick Roberts, as DFO anchorman from Ottawa, Bill Hooper from New Brunswick, and Art Smith from Prince Edward Island. As a group, you are charged with the three tasks cited. And on Thursday, we expect the report on how well we have accomplished what we plan to do. None of this means that the views of others are to be excluded. On the contrary, you are all invited to express your viewpoints in your presentations and in discussion.

SURVEY OF SPORT FISHING IN CANADA: 1980 RESULTS AND 1985 PLANS

Kieth Brickley

Chief, Surveys Unit, Department of Fisheries and Oceans

First of all, I was hoping that the reports on the 1980 survey of sport fishing would here this morning before the session started -- unfortunately they are at the airport. The reports must still be designated as preliminary because of the fact that most agencies have not seen their data aggregated in the form that is in these documents, even though most of the information has been final and has been utilized for the last two years. Today, I'd like to look at what we did for the 1980 survey and perhaps give an evaluation of it with a view to 1985. Our planning stage for the survey in 1980 was fifteen months. During that time virtually every jurisdiction developed individualistic approaches while still maintaining a common core of information on Canada-wide sport fishing. The results of the survey basically stand for themselves. We are talking about six million people fishing in Canada, about 73 million days of fishing, about catching over 150 million fish, and spending about $2.1 billion, of which $1.7 was wholely attributable to the sport fishing. The results of the survey were available in preliminary form in July 1981 and all participating agencies had it no later then January 1982. By any measure save one, the 1980 survey was a success. That measure was the actual dissemination of the data, and the fact that much of the information has not been available to the general public, user groups, researchers, etc. I have no doubt whatsoever that the work we have completed has been of value to the agencies involved. This has been proven many times over. However, with a view to 1985, there are questions to be considered. How useful was the information? What influence did it have on the management of fisheries across the country? Were there parts that were of no value which should not be pursued? Was there information required that couldn't be produced because of the approach used? Critical as you all might be about the lack of reports, the important question about the survey information is how it was used, what was useful, what would we do again, what would we not do again, and what would we have asked either differently or in addition to what we sought in 1980. Out of professional interest there are several points that I'd like to raise. First, the usefulness of the information; DFO can perform a coordinating role but it is incumbent upon each agency to evaluate the information received. This requires direct feedback. Second, an assessment is needed of the overall adequacy, good and bad of the survey. This is an integral part of the planning, and I cannot make such assessments on the part of any jurisdiction. This is the responsibility of all my agency colleagues, individually and collectively.

Finally, how do we go about securing and disseminating all the data in a timely manner? Despite the fact that turnaround time in 1980 was half that of 1975, report generation remains a problem. This is a situation that must be addressed at this conference, considering that 1984 is not timely for 1980 information. Timeliness for cooperating agencies has been fulfilled because most had their data within a year. But with one notable exception, these data have not been published in report form. So, in order to consider 1985 plans, we must address many issues and decide collectively what we wish to do. This requires first and foremost, an evaluation of the 1980 survey, question by question, in each jurisdiction. What should and should not be asked and in particular, what was missing? For example, do we want to look at secondary

industry spin-offs? Do we want to look at economic evaluation? These things have been around for decades. Secondly, survey planning has to be broken into manageable units. This may require a small inter-agency steering committee. Thirdly we must garner more support from anglers. The overall response rate in both 1975 and 1980 was about 60%, but in some places the response rates fell to 44% to 46%. Ron Thomas, for one suggested putting something into the regulations and in vendors outlets saying 1985 would be a survey year. Such a suggestion would have to be made soon. We can't keep on springing surveys on anglers: just too much information is being sought from them by everybody. Finally, none of us are strangers to reduced budgets and cuts in staff. If we are to proceed with this survey, commitments are needed in both respects for the survey years of 1985-86 and 1986-87. This would allow for a more aggressive approach to the planning, conduct, processing, analyses, and the report generation involved. Without such commitment we will still be faster at the gate but never be sure of reaching the finish line. I'd like to finish with some more personal hopes for a 1985 survey that will be totally finished within a year of its start. I'd like to work with my colleagues in Quebec to ensure we have nation-wide statistics which we don't have to qualify with respect to methodology, core data and the like. I'd like to see a product that is actually Canada-wide. I hope that my colleagues of many years continue their aggressive input into the surveys with regard to what they will do with the data, what they will attempt to accomplish and how they wish to see the data analysed, keeping in mind that we have to start planning output before we even start the surveys. I'd like to see the survey conducted in October or November of 1985 in order that the information is in the hands of managers before the next season begins. Only then will it be truly timely information. And as a final note, I'd like to personally thank all those who worked on the 1980 survey. Your support, in light of major drawbacks has been of immeasurable help in getting the job done and being able to even consider a 1985 project.

Discussion

Art Holder: We have found these nationally organized surveys very useful, and we are looking forward with enthusiasm to the one in 1985. Currently, through the cooperation of Mr. Brickley, we are undertaking an interim evaluation of non residents in relation to some new licensing, experimental licensing projects that we are undertaking in northwestern Ontario. We would echo Mr. Brickley in terms of timeliness. We published our own data summary for Ontario but we had counted on the federal government to make a timely report of a more useful public nature. The point, of course, is that it is hardly timely to be publishing 1980 reports in 1984. However, these data are useful to us in reporting to our legislators in terms of effects on our programs and so I would like to say very positively that we do support these surveys.

Victor Rabinovitch: I should explain what has been going on with the surveys unit in Fisheries and Oceans, just so people will understand the work load and why the sport fisheries survey got a bit delayed. Everyone here will know about the Task Force on Atlantic Fisheries. Others will know about the in-depth policy work on the Pacific coast. The work load assigned to Kieth and his few colleagues has been nothing short of incredible. Kieth headed up an income and expenditure survey of east coast fishermen. A similar study has now been done on the Pacific coast, and a parallel study on fishing enterprises earnings. These are incredibly detailed surveys and analyses without one increase in person years over the two and a half years that I've been involved. Quite

frankly I have no idea how he's done it and I can only give you my undertaking such as it's worth that I will try to find more resources in the near future. The fact that there is any result out at all is a tribute to your unbelievable work hours. I don't know how you do it. That's not a point of order but it is certainly a point of information.

Art Smith: To follow up, has there been consideration given to a joint press release by jurisdiction on their own time frames? To follow up on Ron Thomas' suggestion, a press release that 1985 is a survey year would be useful, and it would be a good opportunity to advertise to our fishermen.

NON-GOVERNMENT BRIEFS AND SUBMISSIONS

Sport Fishing Advisory Board

The West Coast Sport Fishery: Finance, Frustration, and the Future

Robert H. Wright
Sport Fishing Advisory Board

I bring you welcome from the Sports Fishing Advisory Board. We represent almost 400,000 salmon sportfishermen out of a total of 800,000 sports anglers in British Columbia. Please forgive me if I am parochial today but we have many thoughts to share with you.

While reading the background paper on the conference I noticed the conference in 1964 recognized, and I quote, "the tremendous and increasing importance of sports fishing". I can only assume that no one attended that conference from the Department of Fisheries and Oceans B.C. region because we have been trying to convince D.F.O. of this very position for more than 20 years.

Notwithstanding our bureaucrats we see a bright light on the horizon and it is held by our new Fisheries Minister, the Honourable Pierre De Bané. During the past year he has met with sportsfishermen throughout B.C. - listened to our problems, fished as a sportsfisherman and promised us a better tomorrow. We believe him and have pledged 100% support for his programs and policies. Perhaps he can move the bureaucracy where we have failed. Attitudes must change and our Minister is in a position to make change happen. We will watch with interest.

Our D.F.O. bureaucrats in Vancouver refer to me as part of the Victoria Mafia. I don't believe they are referring to my ethnic background or my vocation but rather to someone who continually complains about the incestuous relationship between D.F.O. and the commercial industry.

I am speaking from a background that includes:

- Past member of the advisory board to the Pacific International Salmon Commission.
- Past sports fishing representative on the Canada-U.S. salmon negotiations.
- Founding member of the Sport Fishing Advisory Board.
- Member of the Minister's Advisory Council.
- Avid sportsfisherman for the past 30 years.
- Owner-operator of Canada's largest group of salmon sports fishing companies.

So much for credentials.

Let's talk for a few moments about the economics and opportunities of salmon sports fishing in British Columbia.

Remember, there are almost 400,000 active participants in the sports fishery and the majority of these are residents of the province.

From a capital investment point of view, sportsfishermen have almost twice as much money invested in their boats as do fishermen in the commercial harvesting sector. D.F.O. statistics reveal the sports fleet has a capital investment of $1 billion while the commercial fleet is around half that amount.

Again, D.F.O. statistics produce an annual expenditure of $120 million from the sport fishery while the commercial fishery expenditure amounts to $145 million.

Talk about economic impact. The sports sector harvests only 4% of the total salmon catch while our commercial friends take 91% of the harvest. The remaining 5% is taken by the native fishery. I repeat, $120 million expenditure for 4% of the harvest against $145 million for 91% of the harvest.

What is even more incredible, D.F.O. figures show that the sports fishery provides 37% of the total employment in the B.C. salmon fishery.

The recent paper published by the Sports Fishing Advisory Board titled, "Sports Fishing 1984 - Economics and Opportunities" concludes from D.F.O. statistics that:

- The sport fishery makes a significant contribution to the economy and this contribution was derived from only 4% of the catch.
- The sport fishery is economically viable whereas the commercial sector is in a deep financial crisis.
- In two years the sport fishery has increased its contribution to the economy by almost $30 million which represents an increase of approximately 33%.
- The sport fishery is responsible for 37% of the total employment in the Pacific fisheries.
- The sport fishery has increased its employment impact by 10% from 1980 to 1982 whereas employment in the commercial sector has declined.

In spite of this revealing information there are still a large number of bureaucrats in D.F.O. who are blinded by the traditional commercial oriented approach to the resource. They believe the sportfishermen are a pain in the ass and a little Preparation H will make them go away.

I would remind these "ostriches" that:

- In the United States there are more sportfishermen than the combined spectators attending professional football and baseball games. And these are active participants not just observers.

. In Scotland, salmon sport fishing accounts for only 2% of that country's tourists. However, the 2% spends $250 million or 20% of all tourist dollars.

. A B.C. salmon sport fishing operation has financial figures showing revenue per pound of trophy salmon exceeding $300.00 which is almost double the current price of silver.

This brief overview of the economic profile of the sportfishing sector is a clear message directed at the people who are charged with the responsibility of restructuring the fishery to fully realize the economic opportunities available in the future.

Let's hope it doesn't fall on deaf ears.

Today we are faced with a crisis in the salmon resource and an economic crisis in the commercial sector of the fishery. Commercial fishermen have marched on Ottawa, badgering the politicians. Every day newspapers on the coast are filled with copy about the fishery. Banks are foreclosing on commercial fishermens' loans - boats are being seized. There have been sit-ins, position papers and dozens of meetings by the industry.

What happened and how did we get there?

What collapsed the natural chinook and coho stocks?

They tell us 1984 is going to be a disaster.

A common threat is running through the industry. The finger of blame is clearly pointed at the managers of the resource.

For the last 15 years we have had too many boats chasing too few fish. Where were the biologists? Where were the fish managers? If you ask me they were all looking out the window. If attitudes do not change it will be only a matter of time before the resource is completely destroyed.

Let me be more specific.

In 1969, 368 seine vessels were licensed. This was around the time that a buy back program was introduced to reduce the fleet. Jack Davis was the Minister. Let's look at the results of that program.

Today there are approximately 560 seine licenses, almost 200 more than in '69 - you'll have to agree with me - that was a lousy buy back program.

To make matters worse - in the 60's most seine boats did not have hydraulic drums and were limited to 3 or 4 sets a day. In other words, the fleet was capable of 1,472 sets per day.

In 1983 you had 560 seine boats, each equipped with hydraulic drums and capable of 12 to 15 sets per day for a fleet capability of 6,720 sets. That is a conservative estimate.

That is almost a five-fold increase - no wonder the resource is in trouble.

As a matter of interest - 20 years ago the seine boat skippers would set around jumping fish. Today, sophisticated sounders take all the gamble out of dry sets. We are dealing with efficient killing machines. I repeat - no wonder the resource is in trouble.

You know, it wasn't too many years ago that market hunters shot ducks and geese with punt guns. Small cannons - fired from a fixed position in a punt that would kill 60 or 70 birds with a single shot. The lawmakers made these illegal in short order.

Before that, buffalo were killed by high powered rifles mounted on a tripod. Up to 120 animals were killed in a single stand according to James Michener in his book, "Centennial". Look what happened to the buffalo.

Isn't it about time we had a long hard look at the salmon seiners?

I have often wondered about the executive exchange program between D.F.O. and the commercial fishing sector. At the present time through this exchange program, a manager from the commercial fishery processing sector acts as a department director for northern operations while a senior manager from the department works for the processors.

A very cozy arrangement.

I submit it is not in the best interests of the sportsfishermen. There is an annual budget of $85 million for the West Coast D.F.O. Sportsfishermen are allocated five person years - less than 1% of the budget. Where is the equity?

Speaking of management - sportfishermen have been told we have been placing too much pressure on the Fraser River chinooks. When we started to diversify and move out of the Gulf, the northern director of D.F.O., the man who moved from the commercial industry, closed down Kildit Sound. The reason? "To prevent the spread of the sports fishery".

No wonder we are frustrated.

In 1981 as our share of the chinook conservation program, the following seven point plan was initiated to reduce sportfishing catches.

- An 18" minimum size limit on chinook salmon.
- Spot closure on juvenile chinook populations in sub areas where conservation measures are deemed necessary.
- A continuation of the triangle closure at the mouth of the Fraser River.
- A 50% reduction of the winter daily bag limit from 4 chinooks to 2 from December 1 to March 31 each year.
- A season bag limit of 30 chinooks.
- No meat or handlines but downriggers permitted with quick releases.

In return for this conservation program, the Director General promised to leave us alone for 5 years and give the program a chance to work. Only 2 years have gone by - and the creel census last year showed we have dropped 30% below the chinook catch the D.F.O. said we were taking. Now fisheries managers are recommending that we be closed down totally during the winter months. What rubbish! Many Ma & Pa operations would be forced into bankruptcy - no buy back has been offered for them. Even if D.F.O. closed the sports fishery completely and allowed the present commercial harvesting patterns to continue, the natural chinooks would continue to be eliminated.

The commercial fleet must be cut drastically - up to 50% and the remaining fleet, particularly the seine boats, must change their harvesting patterns to remove the pressure on mixed stocks. If the buy back is limited to 20% of the fleet - it will be a joke. In my opinion this will be an economic bailout only. You will remove the marginal fishermen, the ones who want to retire and the beer parlour crowd. You will still be left with twice as many boats as you need to take the allowable harvest.

I want to mention a word about salmon enhancement. This was to be the panacea. Spend money on enhancement, throw more salmon at the fleet and everyone will be happy. Not so! Over 90% of the enhancement program produced salmon for the netters. In many cases, the returning runs of sockeye, pinks and chums arrived at the same time as our weak runs of chinook and coho. These enhanced fish had to be harvested even at the expense of our natural stocks. I think the buzz phrase was "the biggest bang for the buck". In my opinion, the whole damn thing has blown up.

Perhaps it is time to look at one possible scenario for the 1990's.

How about a coalition between the 400,000 salmon sportfishermen and the 210,000 Native Indians? Between us we don't have too much to lose. After all, combined we take only 9% of the allowable catch.

Maybe we could have our own executive exchange - Jean Rivard or Edwin Newman of the Native Brotherhood would become the Executive Director of the Sports Fishing Institute and Jimmy Gilbert or myself could negotiate the Indian Sea Claims.

Perhaps we could solve the problems plaguing the department for the past 25 years and at the same time make British Columbia the sports fishing mecca of the world.

I suggest to you the legal and policy mechanisms are already in place.

Consider the following:

- The policy of the Federal Government is to move the Indians to self government on their reserves.
- Active negotiations are continuing on land claim settlements.
- Our Minister is making every effort to provide economic opportunities to coastal Indian communities.

A judgement from the British Columbia County Court dated June 3, 1983, re: a member of the Squamish Indian Band fishing for salmon confirms the following:

Squamish Band bylaw No. 10 permits band members to fish upon band waters "at any time and by any means.....".

Through federal statutes, bylaw No. 10 is a statutory instrument and has the force of law.

The Fisheries Act stops at the boundary of the reserve and section 81 of the Indian Act takes precedence over the Fisheries Act on reserves where bylaws to regulate fisheries are in force. The Squamish bylaw No. 10, Section 6, states "members of the Squamish Indian Band shall be permitted to engage in fishing upon Squamish Indian Band waters at any time and by any means except by the use of rockets, explosive materials, projectiles, or shells".

Virtually every salmon bearing stream in British Columbia has an Indian reserve at the mouth or on the river. Under Section 81 of the Indian Act, every band can create similar bylaws and set aside the Fisheries Act on their reserves.

To continue with the scenario.

The Indians could notify D.F.O. they will be adopting band bylaws of a similar nature on all appropriate reserves in B.C. Further, in four years time they will start the commercial harvesting of salmon with weirs and other methods on their reserves.

Possible advantages of this program include:

- Biological counting for spawning purposes at weirs on the reserves would be much more efficient.
- With harvesting at river mouths the annual budget for the D.F.O. could be reduced by 75%.
- The Indians could afford to pay for the total buy back program through the annual $145 million harvesting proceeds.
- There would be virtually full employment for coastal Indians in B.C.
- The drain of welfare and U.I.C. would be reduced.
- Salmon products from B.C. would once again be price competitive on world markets.
- Intercepting and mixed stock fisheries would be eliminated thereby giving our weak runs a chance to rebuild themselves.
- And finally, the sports fishery would have a chance to grow and flourish and become a world class experience bringing in millions and millions of dollars to the Canadian economy.

The D.F.O. bureaucrats in Vancouver have turned a deaf ear to the sport-fishermen during the past 20 years. The commercial industry has rolled over on us. Perhaps the Indians will listen. Think about it.

Canadian Wildlife Federation

The Key Issue Is Allocation: A National Perspective

W.R. Martin
Chairman, Fisheries Committee

Abstract

The Canadian Wildlife Federation has a special interest in the conservation and recreational use of fisheries resources. It believes that the principal fisheries goal to be addressed during the next decade is equity in the allocation of fish habitats and resources to their users. This paper sets out a perspective for a national program to meet this objective. In the allocation of multiple uses of aquatic ecosystems, Canadians should promote sensitive uses and reduce degradative abuses. The success of fisheries conservation depends heavily on the priority given to adequate spatial and quota allocations for healthy fish habitats and resource optimization. Explicit allocations of fisheries quotas amongst resource users are increasingly important for effective management. The legitimate rights of Native, hinterland, recreational and commercial fisheries are examined, and in multiple-use fisheries the case is made for priority to non-commercial users. Effective management of fisheries depends on a strong base of relevant research and experimental management, and on active participation of legitimate resource users in negotiating allocations, and on increasing responsibility for self-regulation of the resultant management decisions. The Canadian Wildlife Federation will attempt to actively represent recreational interests on national fisheries issues, such as allocation.

Résumé

La Fédération canadienne de la faune s'intéresse particulièrement à la conservation et à l'utilisation à des fins récréatives des ressources halieutiques. Elle est d'avis qu'au cours de la prochaine décennie, le principal objectif à atteindre est une juste répartition des habitats et des ressources entre les utilisateurs. Le présent document décrit l'orientation d'une programme national visant la réalisation de cet objectif. Dans le cadre de la répartition des utilisations multiples des écosystèmes aquatiques, les Canadiens devraient favoriser la sensibilisation des utilisateurs et réduire les abus qui causent la détérioration de l'habitat et des ressources. Le succès de la conservation des pêches dépend grandement d'allocations adéquates sur le plan de l'espace et des contingents, en vue de maintenir les habitats du poisson en bon état et d'optimiser les ressources. La répartition précise des contingents entre les utilisateurs revêt une importance de plus en plus grande pour une gestion efficace des ressources. Les droits légitimes liés à la pêche des autochtones, à la pêche dans l'arrière pays et aux pêches sportive et commerciale sont examinés et, dans le cas des pêches où les utilisateurs sont multiples, on tente de démontrer qu'il faut accorder la priorité aux utilisateurs non commerciaux. La gestion efficace des pêches dépend de la

solidité des recherches et de la gestion expérimentale, de la participation active des utilisateurs légitimes lors de la négociation des allocations et de la responsabilité accrue en matière d'autoréglementation suite aux décisions de gestion qui en découlent. La Fédération canadienne de la faune tentera de soutenir activement les intérêts de la pêche sportive pour ce qui est des questions de pêche nationales comme la répartition des ressources.

Introduction

The Canadian Wildlife Federation is the appropriate non-government organization to represent Canadian recreational fisheries interests at the national level. The details of CWF fisheries policy are set out in Appendix 1. The initial fisheries program development to implement this policy has provided the basis for the CWF papers submitted to this conference.

The CWF approach is to: (1) interpret recreational fisheries as broader than sport fisheries, to include resource-use activities such as snorkelling, whale and salmon watching, and wide-spread interests in aquatic ecosystems; (2) concentrate efforts on national issues, and leave local and provincial fisheries matters to appropriate CWF affiliates, wherever possible; and (3) play a collaborative, responsible, and professional role in support of Canadian recreational fisheries.

After considering a variety of recreational fisheries issues that might be addressed, such as surveys, science, economics, jurisdiction, regulation, who pays, and resident/non-resident angling, it was concluded that the key issue is allocation. CWF was fortunate to commission Dr. Regier of the University of Toronto to prepare an exploratory essay on fisheries allocation. This paper was distributed to conference participants, and subject to revision and editing following the conference, will be submitted for publication. Dr. Regier's document has provided valuable background for this national overview of the allocation issue and for the three CWF regional papers by Messrs. Myles, Loftus and Lucas.

A review of the evolution of our understanding and management of aquatic ecosystems and fisheries, to a widespread recognition of the importance of allocation, provides a useful perspective for our consideration of the objective of this conference, to develop goals and programs for the Canadian Sport fisheries of the 1990's.

Aquatic Ecosystems

As multiple uses of aquatic ecosystems expand in range and intensity, Canadians are increasingly aware of the conflicts between sensitive uses and degradative abuses of aquatic ecosystems. There is growing recognition that responsible fishing, safe drinking water, clean boating, swimming and aquatic nature study are compatible sensitive uses of aquatic ecosystems. Conversely, there is growing concern over degradative abuses of aquatic ecosystems, such as waste disposal, forestry and agricultural practices, damming and harbour developments. Accordingly, there is public pressure to promote sensitive uses and reduce degradative abuses in the allocation of multiple uses of aquatic ecosystems.

These interests are fostered, in part, by the preeminence given to fish habitat protection through the Fisheries Act. During the past two years, CWF has contributed to this clean-ecosystem objective through its campaign to combat Acid Rain.

Resources

Management of Canadian fisheries resources has evolved from emphasis on fisheries development of underexploited resources to an appreciation of the limits to resource productivity, and the need for conservation programs to protect resources from the growing variety and intensity of fisheries. Rehabilitation of resources has become top priority for intensively exploited stocks, and resource maintenance is of general concern everywhere. Resource enhancement programs, such as lake fertilization, salmonid transplants, and aquaculture have been added to supplement resource bases. All responsible resource users have a common interest in protecting fisheries resources for best long-term benefits. To this end, adequate allocation to resource reproduction has high priority, and allocation of sites is fundamental to the development of enhancement programs.

Resource Utilization

Management of resource utilization has evolved slowly in response to problems associated with common-property, open-access, free-use fisheries. Objectives of maximum sustained yields changed to optimum use of finite resources for social and economic benefits. As a general rule, it is now apparent that greatest benefits are achieved at moderate levels of fishing intensity. An increasingly complex network of indirect limits and constraints on resource uses has been adopted, such as size limits, gear restrictions, bag limits, seasons, and closed areas. On the whole, they have not satisfactorily met the management needs, and enforcement of regulations has become overly demanding and expensive. Adoption of quotas has gained in importance as a management tool, and we now have widespread recognition at all jurisdictional levels that explicit allocation of quotas amongst users is the more effective and efficient method of fisheries management. Although total allowable catches are now used extensively in commercial fisheries, allocation of resources to other users has been much less precise.

Rights

Allocation and reallocation of fisheries resources and their habitats depend on clear identification and acceptance of legitimate utilization rights. The political process of establishing rights can be made more objective by considering the principles involved in making fisheries more productive and beneficial.

The rights of Native peoples are defined constitutionally, and are accepted as they apply to fisheries. Native peoples are equally concerned with other resource users in recognizing that protection of aquatic ecosystems and the resource base is of primary importance, and that fisheries regulations are essential for optimum continuing benefits.

Fisheries are of special importance for food, employment, and economic benefits in the more remote regions of Canada. Alternatives are scarce there, and local rights to resources are accepted by migratory fishermen and the general public.

Recreational use of fisheries is increasing in Canada, both quantitatively and relative to other resource uses. Surveys carried out in 1975 and 1980, as a result of the initiatives of Canadian Sport Fisheries Conferences, have shown that approximately one quarter of Canada's population participates in recreational fisheries and that, in terms of economic importance, recreational fisheries make a greater contribution to Canada's GNP than the total Canadian commercial fisheries. Individually, salmon have a much higher value if caught by sport rather than commercial fishermen. Sport fishing continues to dominate recreational use of fisheries, but non-consumptive uses such as snorkeling, whale and salmon watching, and catch-and-release angling are becoming very popular. Accordingly, the rights of recreational fisheries are well established in Canada, and are legitimate from ecological, social and economic perspectives.

Commercial fisheries have been the backbone of fisheries utilization in Canada. Their social and economic benefits are particularly important in coastal regions. The fishing industry has taken a well-organized approach to the development and management of their legitimate rights to fisheries resources. These rights have increased over the past decade with the extension of coastal limits to 200 miles.

Priorities

All these classes of fisheries resource users share a common responsibility for promoting sensitive uses and for reversing degradative abuses of aquatic ecosystems. They also share a common responsibility for resource husbandry, whatever the appropriate objective, be it rehabilitation, maintenance or enhancement. These are top priorities.

Beyond these ecological considerations, some fish resources, notably the salmonids, are shared by varied users, all with legitimate rights. In such cases, it is necessary to establish priorities based on social and economic considerations, in order to provide explicit allocations, by areas and quotas, to achieve greater equity amongst users. Appropriate allocations should be taken for Native rights and for the needs of fishermen in remote areas. There are social and economic grounds for assigning next priority to allocations for recreational uses. The surplus, which is normally much greater than the total of other allocations, may be allocated to commercial fisheries and shared amongst them to achieve optimum, long-term economic benefits.

Allocation Process

The process of management by explicit allocations should include a strong base of scientific information, universal licensing, partnership of users and managers, and cost effectiveness.

Research is necessary to understand the relevant ecosystems and resources, and the impacts of the various users. A good research program will provide valuable predictions on the benefits or adverse consequences of changes in allocations.

There is rarely enough scientific information to satisfy fisheries managers. In the case of Atlantic salmon, for example, there must be more published and active research than for any other single fish species, and yet managers and users are continually frustrated with the condition of salmon fisheries. Greater use of experimental management should speed up the process of scientific management. Opportunities should be found to carry out management experiments, with appropriate attention to design, implementation, assessment, evaluation and documentation of results. The resultant information could then be applied on a broader front in fisheries management.

Universal users licenses or leases are required to define limits, fees and responsibilities. Such identification, authorization and acceptance of rights permits limitation of entry and control of harvests by area, resource, fishing method, and quantity taken. Total allowable catches and enterprise quotas have become accepted allocation terms in fisheries management.

The allocation process is benefiting from decentralization of management responsibility, and from more active participation of resource users in the bargaining process that recommends appropriate allocations to the decision maker. For example, during 1983/84, Native, recreational and commercial Atlantic-salmon spokesmen met with some success in negotiating solutions to a resource management "crisis".

Fisheries management must be cost effective to be successful. Use of explicit allocations simplifies the regulatory process, by moving beyond the complex accumulation of indirect limits and constraints. Management costs can be kept under more reasonable control if the resource users assume greater responsibility for self-regulation of the management decisions which they have negotiated and accepted.

CWF Role

A Sportfishing Institute (USA) paper on best-use allocations, by Stroud et al.(1982) points out that "The users having the greatest amount of political power determine the allocations". This political power is a function of the total number of resource users involved, and the extent to which they are mobilized to represent and advocate their interests in a responsible, credible and professional manner.

At the Canadian national level, commercial fisheries and Native-rights interests are well organized and represented. There is a great opportunity for CWF to actively represent the interests of recreational fisheries in Canada, and thereby contribute to greater fairness and equity in fisheries allocations.

Appendix 1

Canadian Wildlife Federation

Fisheries Policy Resolution

(adopted at CWF Annual Meeting in May 1983)

WHEREAS C.W.F. supports the principal objectives of fisheries management:

- to conserve, perpetuate and enhance Canada's fisheries resources;

- to optimize net benefits to Canadians from existing resources and their enhancement;

- to ensure distribution of benefits among authorized users of fisheries resources on an equitable basis in accordance with social and economic values; and

- to administer the program in consultation with governments, user groups, and other interested non-government organizations;

AND WHEREAS Recreational fishing is next to swimming as the greatest water-based recreational activity of Canadians;
AND WHEREAS Recreational fisheries exceed commercial fisheries in overall value to Canadians;
AND WHEREAS Commercial fisheries interests are well organized regionally and nationally through the Fisheries Council of Canada;
AND WHEREAS the Canadian Wildlife Federation, as a national, non-profit, non-government organization, with over 500,000 members and supporters across Canada, has a strong interest in fisheries, and is therefore the appropriate body to represent recreational fisheries interests at the national level;

THEREFORE BE IT RESOLVED THAT:

(a) C.W.F. explicitly identify with and represent recreational fisheries as a legitimate, valuable, and significant use of Canada's renewable resources;

(b) C.W.F. declare that its objectives include a special interest in the conservation and recreational use of fisheries, within its definition of wildlife; and

(c) C.W.F. commit programs, staff and budgets to fisheries issues, in order to reflect its specific interest in promoting the conservation, perpetuation, and recreational use of fisheries.

BE IT FURTHER RESOLVED THAT C.W.F. collaborate with and support governments in seeking to achieve fisheries management objectives through:

(a) development of data bases for recreational fisheries;

(b) socio-economic studies relevant to the allocation of fisheries resources among authorized users;

(c) promotion of experimental management and enhancement programs in fisheries; and

(d) representation of recreational fisheries interests in advising governments concerning policies, and strategies for fisheries management.

BE IT FURTHER RESOLVED THAT C.W.F. conduct information, education, investigation, and award programs in order to promote an awareness, understanding and appreciation of Canada's fisheries resources, and to ensure their effective conservation and fair allocation among all Canadians.

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Canadian Wildlife Federation

Allocation of Atlantic Salmon

C.W. Myles
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Abstract

The allocation of any finite resource must be based on principles that will provide optimum benefits to Canadians both in the short and long term. There are a number of legitimate consumptive users of the Atlantic salmon resource and each is entitled to a share based on social and economic principles. The process of developing explicit allocations must involve participation by each of the legitimate user groups. It must be based on sound scientific and technical advice. It must weigh and attempt to balance traditional, social and economic values. It must provide for constant monitoring and assessment to permit timely changes based on new information. Above all it must provide for the rehabilitation and maintenance of the resource.

The future of Atlantic salmon stocks will only be secure if radical changes are made to present management methods, and the key is explicit allocations.

Résumé

La répartition de toute ressource limitée doit reposer sur des principes qui offrent des avantages optimums aux Canadiens, tant à court terme qu'à long terme. Il y a un certain nombre d'utilisateurs-consommateurs légitimes des ressources de saumon de l'Atlantique et chacun a droit à sa part selon les principes sociaux et économiques. L'établissement d'un mode de répartition précis doit être mené en collaboration avec chacun des groupes d'utilisateurs légitimes. Il doit être basé sur des conseils scientifiques et techniques fiables. Il faut évaluer les valeurs traditionnelles, sociales et économiques et tenter d'obtenir un équilibre. Il faut aussi assurer un contrôle et une évaluation constante afin de pouvoir apporter des modifications opportunes en fonction de nouvelles données. Avant tout, il faut assurer le rétablissement et le maintien des ressources.

L'avenir des stocks de saumon de l'Atlantique ne sera assuré que si des modifications radicales sont apportées aux méthodes de gestion actuelles et la clé en est la répartition formelle.

Introduction

Sport fishing plays an important role in providing economic benefits for many Canadians in Eastern Canada. The pursuit of sport fish provides an industry that should not be taken lightly. The value of the Atlantic salmon sport fishery alone generates many millions of dollars in direct and indirect spending. The salmon is, by far, the most valuable part of the Atlantic sport-fishing industry. We are concerned with other sport-fishery species and their management, but because of the value of, and the available data on, the Atlantic salmon, this paper is confined to allocation of this species.

The story of the Atlantic salmon is often told. There are probably very few people in Canada who have not heard of the plight of the Atlantic salmon. Few people have not heard commercial fishermen blame sports fishermen, or sport fishermen blame the native food fishery, or Canadian fishermen blame foreign fishing off Greenland. In fact, it seems that everyone blames someone else for the rapidly diminishing stocks of this valuable fish. It no longer matters who is to blame.

We have reached the point on many of our best salmon rivers where production is well below optimum levels. The most desirable salmon, the multi-sea winter females, have been over exploited and their egg production potential is needed to maintain our river stocks. Unless we change our approach to managing these stocks the future bodes ill for all user groups, as there will be little left to allocate.

Management

Because of the migratory nature of salmon, management must be applied on an inter-related basis throughout its entire range. History has proven that management techniques which are not universally applied have only led to increased catches in other sectors, thereby negating any potential gain. Management of the harvest of Atlantic salmon for all legitimate user groups must be accomplished with one ultimate goal in mind - to allow sufficient spawning escapement. Short-and long-term objectives must be set. Short-term because we have a critical and immediate problem, and long term in order to achieve maximum economic and social benefits from the resource in the future.

In the short term, the salmon harvest on those stocks known to be from home rivers with insufficient spawning stocks must be restricted to a grilse only harvest by those fisheries located in these rivers. In those fisheries that take mixed stocks of multi-sea-winter fish, a reduction in harvest equal to the percentage of fish estimated to be destined to these rivers is necessary. This reduction should be based on available scientific evidence, even though it may not be conclusive or current. The reduction must extend to the harvest by licensed commercial salmon fishermen and to the harvest in the commercial by-catch. If season adjustments are used to effect the reduction in a particular area, care must be taken to ensure that any gain realized in that area is not lost to another.

The West Greenland fishery is one of the factors contributing to the present decline of Atlantic salmon stocks. In fact it is considered by many to be the most serious factor. Negotiations at the highest level must pursue an immediate and major reduction of the quota set for the West Greenland fishery.

In the longer term, scientific data must be gathered on numbers of fish, migratory routes, impact of interceptory fisheries, and spawning potential of rivers. A system must be developed that will allow a reasonably accurate prediction of smolt survival, smolt-to-adult survival and return rates. Studies have been carried out indicating that one-sea-winter salmon returns can be predicted. This program should be expanded in order to determine its full value in predicting returns from smolt migrations both on one-sea-winter and multi-sea-winter salmon. Once this scientific information is in place, and much of it

has been started, management by explicit allocation can be implemented more effectively. It is, however, essential that scientific advice be followed and not ignored, as has been the case all too often in the past.

Allocation

Historically, allocation of salmon stocks has been controlled by season and area access in the commercial sector, and by season, daily limits and area access in the sports fishery. The Native food fishery controls vary from season to quotas. The West Greenland fishery, and only recently, the New Brunswick commercial fishery have been under specific quota harvests. This varied approach to resource management does not allow for equitable allocation, nor does it provide for the most essential objective, to guarantee sufficient spawning escapement.

We believe that explicit allocation to each segment of the legitimate consumptive users is essential. Using scientific advice all areas of interception must be defined and allocation of quotas by volume or numbers must be established on a consistent basis that allows for comparisons throughout the Atlantic salmon route. These quotas must include all fish taken in the area by whatever method. Each user group is entitled to its quota, but must ensure that sufficient fish pass to meet the needs of the next user in the system.

Sports fishermen cannot be allowed to take advantage of any windfall that may occur. Allocations by river, stretch of river, or even by individual pools must be established. Reporting systems and tagging methods must be developed to ensure that explicit allocations can be monitored and enforced for all user groups. In the final analysis, the first priority must be for sufficient spawning escapement to obtain optimum sustainable yield.

Conclusion

Explicit allocation of the Atlantic salmon resource will work. However, there has to be a common understanding of purpose and a conviction among user groups that the conservation efforts of any one group will not be taken advantage of by another. Negotiations on explicit allocations must be by balanced representation of all identified user groups. Once a sense of balance and understanding has been reached, scientists, managers, and users can work together to achieve the common objective -- optimum use of the resource, both in the short and long term.

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Canadian Wildlife Federation

The Allocation Issue from the Freshwater Fisheries Experience

K.H. Loftus

Abstract

Provincial agencies have recently made significant progress in developing explicit fish allocation policies. The development of a national perspective on the allocation of fish and fish habitats could provide needed assistance in consolidating and in implementing these policies. The allocation issue is a good place to start development of national perspective for fisheries, because discussions will, of necessity, bring into public focus a number of other important fisheries issues. Examples of these issues discussed include: the lack of clearly defined goal statements among fisheries agencies; past over-development, excessive use of fish and misuse of habitats, together with persistent unrealistic expectations of the resource base; and lack of mechanisms to facilitate an informed and involved public.

Résumé

Des organismes provinciaux ont récemment réalisé des progrès importants dans l'élaboration de politiques précises sur l'allocation du poisson. Le développement d'une perspective nationale sur l'allocation du poisson et sur son habitat pourrait apporter l'aide nécessaire à la consolidation et à la mise en oeuvre de ces politiques. La question de l'allocation constitue une bonne base pour l'élaboration d'une perspective nationale sur les pêches, car les discussions amèneront inévitablement sur la scène publique un certain nombre d'autres questions importantes touchant les pêches. Les questions traitées portent, par exemple, sur l'absence d'énoncés d'objectifs clairement définis au sein des organismes de pêche, le surdéveloppement passé, la surexploitation du poisson et le mauvais usage des habitats ainsi que l'évaluation continuellement irréaliste des ressources et l'absence de mécanismes permettant de faciliter l'information et la participation du public.

Introduction

As some of you may know, I am a recent graduate from the Ontario campus of the College of Freshwater Fisheries Research and Management. That institution has been variously referred to as the Ministry of Natural Resources, the School of Hard Knocks and "Damn Gummint". Now, after my 35 year apprenticeship I am a full fledged member of the public, and I propose to become an active individual user. During the last 10 or 15 years of apprenticeship I became convinced that the single most important obstacle to the achievement of effective fisheries management was, and remains, the lack of well-informed and involved public. As

far as I am aware no person, organization or agency has yet developed a mechanism which provides an effective opportunity for the public to become well informed on fisheries and aquatic ecosystem issues and to become actively involved in the management decision making process. This issue is apparent at the local, provincial and national levels and it is encouraging for me to learn that the Canadian Wildlife Federation, with its Fisheries Policy resolution (see Appendix No. 1 of Dr. Martin's paper at this session) may be willing to tackle the currently vacant leadership role in addressing this and other national fisheries issues.

Scope of the Allocation Issue

The development of a national perspective on allocation will constitute progress towards addressing a major fisheries management issue in Canada. In addition, its development will gradually bring into focus a number of other issues or problems which, to date, have precluded the delivery of effective fish management. If the perspective can be developed with extensive public participation, and in full view of most Canadians, it can contribute in a substantial way to informed consensus. To all concerned, this would be a welcome relief from the noisy confrontations among organized users which have become almost routine, and which often generate more heat than light. Continuing confrontation usually results in perceived crises which are settled by political decisions. Such decisions contain elements which are seen as good by some users, as bad by some other users, and which are seen by many as short-term pain killers which allow us to forget, for a little time, that we have a basic problem which must be faced sooner or later. Frequently also, such decisions are made at the expense of the resource base.

In the freshwater area during the 40's and 50's when there were lots of fish for everyone, when supply still exceeded demand, we had, at best, a very poor perception of the allocation problem that was then emerging. The skirmishes all appeared to be local and were put down by fiddling a boundary line here, a sanctuary there, or a not very effective regulation everywhere. We have avoided facing the problem so long that it is now as full blown and complex as is admirably described by Dr. Regier's background paper and by Dr. Martin's presentation at this conference. It has become complex in the freshwater area because our resource base has become fully used, indeed excessively used, and because the productive capacity of many of our waters has been impaired by the progression and accumulation of the man-imposed stresses generated by a modern industrial society. The demand for fish now exceeds the supply in important parts of the freshwater area. The insidious march of events which resulted in our current supply deficit, and which was so frustrating and baffling to fisheries scientists while it was happening, is now reasonably well understood and documented. Most of you here now share at least some of that understanding, but for those who wish to improve it, selected reading and study should include: SCOL symposium, 1972; selected perspectives arising from the special study series sponsored by the Fisheries Research Board of Canada, 1975-77: S.P.O.F. documents, particularly No. 1 dealing with Goals and Issues, and No. 4 the Strategy; other symposia such as PERCIS, S.L.I.S., and STOCS all of which appear

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SCOL - Salmonid Communities in Oligotrophic Lakes
S.P.O.F. - Strategic Plan for Ontario Fisheries
PERCIS - Percid Community International Symposium
S.L.I.S. - Sea Lamprey International Symposium
STOCS - Stock Concept International Symposium

as volumes of the Journal of the Fisheries Research Board of Canada and/or its successor, the Journal of Fisheries and Aquatic Sciences. Also informative in a comprehensive way are documentations of the Strategic Great Lakes Fishery Management Plan and of Great Lakes Ecosystem Rehabilitation published by the Great Lakes Fishery Commission.

A number of freshwater fisheries management agencies have recently re-examined and published fish allocation policies. Water allocation policies are harder to find. There appears to be general agreement on the rationale for allocating fish available among user groups, but few agencies have proceeded very far with implementation. Most agencies are still wrestling with the identification of biological data required to implement and maintain their allocation policies through time. Few agencies have achieved an explicit statement of their social and economic data requirements. Most agencies have made more progress in the implementation of their policies with respect to commercial fisheries, than they have with recreational fisheries and with their tourism industries. Few if any fish management agencies have made recognizable progress in defining an allocation, if indeed one must be made, to other water uses which have impact upon the fish producing capability of water, and which have implications for human health.

There is much to do and there is an urgent need for national perspective and guidelines in support of regional, provincial and local efforts. Valiant local and/or provincial progress can be negated by local and provincial differences in just the same way that national positions can be rendered ineffective by lack of international accord.

Some Other Related Issues

It was suggested earlier in this paper that the development of a national perspective on allocation would bring into focus some of the other issues which, to date, have precluded the delivery of effective fishery resource management. Some specific examples follow. In order to make the examples easier to present for consideration here, those selected deal only with the allocation of fish among users.

What Business Are We In?

At first blush this may seem to be a dumb question to pose as a means of exposing a serious problem to be resolved in approaching the allocation issue. I expect that every person who becomes involved in the development of an allocation perspective would have a ready answer to the question, but chances are good that it won't be asked because its importance is often not recognized. It is quite natural to get well along in the discussion process, for days and indeed months, before endless argument, often quite futile, leads to the recognition that the answers from a group of people are highly personal reflections of individual expectations. While the variety of answers seems endless they can perhaps be clustered arbitrarily and listed as follows:

(a) food production
(b) recreational opportunities production
(c) dollar production
(d) fish production
(e) natural resource management
(f) political election fodder

(g) any combination of the above

My personal bias towards natural resource management with an ecosystem perspective is probably both obvious and beside the point. The important point is that an agency must decide what business it is in, must explicitly define its goal, before a rational allocation can be developed in support of the goal. Without such a clear statement of purpose there can be neither effective public involvement nor effective use of the science available. Both are essential.

What Level of Fish Production is Realistic?

In approaching the question of allocation it will be important to achieve a broader consensus about the productive capacity of water. Just as water is a finite, though relatively abundant resource in each province, so also is the fish production capacity. That production capacity can and should be estimated using indices currently available, and should be public knowledge. It seems to me important that our clients more clearly understand that, during earlier decades, our permissiveness allowed excessive use of fish resources and excessive misuse of water resources. Now, in many parts of the freshwater area, we are in the process of trying to regain, through expensive rehabilitation programs, the fish production capability temporarily lost because of those past excesses. While we anticipate gradual success from these programs, our expectation cannot realistically match levels of production capable of supporting past excesses. Because the process is slow and unspectacular, it is important that collectively we face the fact that there are no known short cuts or quick fixes to the process. Unfortunately, the public perception of some current, highly visible and popular programs may contribute to the perpetuation of the "quick-fix" myth. For example, some natural resource agencies are delivering major fish planting programs. While there is obviously no argument that some of these programs produce much needed fishing opportunities quickly, still one must think carefully to sort out the extent to which type contribute to long-term natural resource management of either fish or water. I sometimes am concerned that some of these programs can be compared with unemployment insurance programs. The latter are necessary, popular, and meet short-term local needs. They also tend to be perpetuated, perhaps at the expense of programs designed to alleviate the basic causes of unemployment. I trust it will soon be more widely understood that some fish planting programs appear to be most successful in meeting short-term perceived needs in those locations where the natural fish community is in the greatest disarray; disarray resulting from past excesses and/or abuse. Their successes over the long term, in terms of contributions to natural reproduction (natural resource management) remain very much an open question. These points, if in fact they prove to be valid, need to be better understood by those involved in addressing the allocation issue, if expectations are to be realistic.

Allocation to Maintenance and Rehabilitation

It is now pretty well agreed that in the past we have allowed exploitation to exceed the "safe" level of annual productive capability. Presumably we wish to avoid the costly consequences of such excesses in the future. The question therefore arises; How much can we safely remove, and how much must be left in the water to maintain the resource in a self-reproducing state? These questions cannot now be answered precisely for freshwater species and ecosystems; we must therefor reach for an informed consensus based upon the science that is now

available, and we must use that judgement as our starting point. The precision of the definition of "safe" level will improve only if we agree to learn as we go, using carefully designed experimental management or the adaptive management approach. In situations where we find ourselves in the "rehabilitation" mode, in contrast to the "maintenance" mode, we probably need to leave a larger proportion of fish out there for the rebuilding of stocks, but again, the precise proportion is not known with precision and we must learn as we go. Unfortunately, it is not now uncommon to see carefully designed fish rehabilitation planting projects completely reduced to put-and-take programs by the unrestrained "demand" of users.

Potential Freshwater Contributions

The foregoing are a few examples of issues which will emerge as we tackle the central issue of allocation. It seems a formidable task requiring major commitments by a lot of people. I think it must be done, and I believe we have a lot going for us as grounds for optimism.

In the freshwater fisheries area we have an extensive network of people with considerable progressive experience in coming to grips with most of these questions. We won't be starting from scratch if we bring such assets as these provincial agency people, the provincial users, and the involved academics to a national consultation. We can bring to such a table most of the general science that is needed for effective fisheries management, and a sense of urgency that it be used. Of course there are serious gaps in our understanding of the operative mechanisms in these varied and dynamic ecosystems with which we must deal. Of course we must face uncertainties while research seeks to further our understanding, but we must get on with the job now. We, in the freshwater area, can also bring an unfortunately extensive experience in trying to rehabilitate badly degraded ecosystems. We can also probably bring to a truly national consultation, some frustrations of long standing which may very well prove to be an asset. Many of us are frustrated as individuals and as representatives of provincial agencies, at our inability to deliver the kind of effective resource management programs we believe are possible and practical. We need help. We are frustrated with Federal-Provincial agreements which, though negotiable, seem negotiable only within political and legal bounds which appear to be designed to manage agency and political profiles rather than resources. Fisheries people in provinces don't want "handouts", or "we'll do it for you, poor thing", we need and want honest partnerships dedicated to resource management. I recall in 1974, the then Senior Assistant Deputy Minister of Fisheries, Ottawa, Ken Lucas, in contributing to the initiation of the joint Federal-Provincial process which developed the Strategic Plan for Ontario Fisheries, emphasized his hope of developing a regional component of a national fisheries program. That concept, in contrast to the traditional Federal and Provincial pie slice arrangement was appealing to participants. The Federal and Provincial people worked well, and positively, together over a period of some two years, once we got our respective agency "hang-ups" out of the way. I think an excellent and comprehensive strategy was developed by that group, a strategy which could well have been a regional component of a national program. The other regional components of the National strategy failed to appear, and eventually the strategy became an Ontario strategy for lack of further involvement by the Federal Ministry. I suppose, in retrospect that the dream withered for lack of political support, and for lack of involvement, understanding and commitment by our publics. I'm not at all sure now that any single or any pair of agencies, even with the best

efforts of their fisheries people, can create and activate a national fisheries program: agency constraints appear to be too strong. I believe that many fisheries experts want it to happen, I believe most of the public, particularly the users, need it to happen and I believe only the public can make it happen.

If we can bring our historical lessons and all our assets and science to a national consultation which seriously involves a broad spectrum of people through the active participation of a public body such as the Canadian Wildlife Federation, we may just possibly revive the dream and convert it to reality.

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Canadian Wildlife Federation

Allocation of Access to the Fishery: A Canadian Pacific Coast Perspective

K.C. Lucas

Abstract

British Columbia's fisheries on the five species of Pacific salmon are among the most valuable of all Canada's fisheries. These resources are exploited by a large number of resident tidal-water sport fishermen as well as

by non-resident anglers, by extensive commercial fisheries pursued by competing groups of fishermen using several types of gear, and by native Indians living along fresh water migration routes who conduct traditional food fisheries.

Canada's Pacific salmon fisheries are in sharp economic and social decline, beset by numerous, very complicated problems. Yet, there remains the opportunity for substantial economic and social development from these fisheries. Failure to successfully manage the issue of allocation of use of the salmon resource is at the root of the problem. A fresh approach to fisheries management is prescribed as the only way to overcome past difficulties and to realize the potential of the Pacific salmon resource.

A planning approach is suggested commencing with established goals to be met through the use of the fishery resource, and development of strategies on how goals can best be achieved or how problems are to be overcome. The need to more fully understand the fisheries and to ascertain their contribution to society, as well as their costs, is emphasized as a fundamental strategy. Another is the need to develop meaningful interaction in the decision making process between recreational user groups, other users and the general public with government fisheries allocation decision makers. Programs to implement these strategies are proposed and action required by recreational fisheries participants to obtain an equitable allocation of access to the resource is proposed.

Résumé

La pêche des cinq espèces de saumon du Pacifique en Colombie-Britannique est parmi les plus profitables de toutes les pêches du Canada. Ces ressources sont exploitées par un grand nombre de pêcheurs sportifs locaux dans la zone intertidale et par des pêcheurs à la ligne venant de l'extérieur. Elles font aussi l'objet d'une pêche commerciale intensive menée par des groups concurrents de pêcheurs utilisant plusieurs types d'engins et de la pêche de subsistance traditionnelle des autochtones vivant le long des voies de migration d'eau douce.

Au Canada, la pêche du saumon du Pacifique est en plein déclin économique et social, frappée par des problèmes nombreux et très compliqués. Cependant, elle conserve des possibilités de développement économique et social substantielles. L'incapacité de régler la question de la répartition des ressources de saumon est à l'origine du problème. Le recours à une nouvelle méthode de gestion des pêches s'impose comme la seule façon de résoudre les difficultés passées et de réaliser le potentiel des ressources du saumon du Pacifique.

On propose une méthode de planification portant d'abord sur la fixation des buts à atteindre dans le cadre de l'utilisation des ressources et sur l'élaboration de stratégies concernant la façon dont on peut le mieux atteindre ces buts ou résoudre les problèmes. Le besoin de mieux comprendre les pêches et d'établir leur coût, est posé comme stratégie fondamentale. Un autre besoin fondamental découle de la nécessité d'établir des relations constructives dans le cadre du processus de prise de décisions entre les groupes d'utilisateurs sportifs, les autres utilisateurs et le grand public et les autorités gouvernementales responsables de l'allocation des pêches. On propose d'établir

des programmes de mise en oeuvre de ces stratégies et d'adopter les mesures requises par les pêcheurs sportifs pour obtenir une répartition équitable des ressources.

Introduction

In assisting the Canadian Wildlife Federation to address the key fisheries policy issue of allocation of access to the fishery, I will draw on my many years of apprenticeship as a fisheries professional, namely fisheries/ environmental engineer; regional fisheries manager (Pacific Region); national subject matter specialist and policy advisor on salmonid protection, management and enhancement; first administrator of the national environmental protection service; and finally six years as the senior administrator in charge of the Canadian Government's fisheries and marine program.

As well, my views on the subject have gone through considerable further development during my three year stint as head of the Fisheries Department of Food and Agriculture Organization in Rome where the opportunity was afforded to obtain a world overview on the difficulties almost everyone is having with successfully managing and developing their fisheries - and in particular, managing the issue of allocation of the right of access to the resource.

Now I'm back in Vancouver working in the private sector, but after over 30 years of grappling with fisheries management, protection and allocation issues, one cannot help but be intensely interested in the enormously difficult issues still to be addressed in the effective management and sensible use of the majestic fisheries resources in our country and region.

I hope you have had the opportunity to review Dr. Henry Regier's excellent background essay on the subject of allocation of fish to fishermen produced for the Canadian Wildlife Federation for presentation to this 1984 Canadian Sport Fish Conference(1). Henry has covered the field and the related literature thoroughly and has provided an intellectual basis for dealing with policy formulation and specific allocation issues. I plan to address the allocation policy issue with the Pacific salmon fishery of British Columbia in mind, much as Wes Myles dealt with that other great Canadian anadromous resource, the Atlantic salmon, in his Atlantic regional perspective(2). However, I'm also going to be echoing Ken Loftus' views contained in his Freshwater Fisheries Experience regional paper(3), especially concerning the need for a public process for developing fisheries policy so that we can have rational and farsighted political decisions governing the use of the public fisheries resource.

The Canadian public and especially all the users of our fish resources and their aquatic habitats need to become better informed on fisheries and aquatic ecosystem issues in our country and to become actively involved in the fisheries management decision making process. It is thus a most encouraging development to see the Canadian Wildlife Federation take the initiative of encouraging the examination of key fisheries policy issues such as allocation and providing a much needed national focus, and through their affiliated provincial organizations, a regional and local focus on recreational fishery policies and programs. The CWF Fisheries Policy Resolution of May, 1983 identifying the Federation with the advocacy of equitable recreational use of the fisheries resource and pledging active representation of their sector in the development

of public policies and programs for management of the recreational fisheries and the preservation and enhancement of the resource base is a most welcome development(4). I congratulate the Federation on this move and especially the work of Dr. Bob Martin, Chairman of the CWF Fisheries Committee and Mr. Ken Brynaert, Executive Vice-President.

Canada's Pacific Salmon Fishery

Importance

British Columbia's fisheries on the five species of Pacific salmon are among the most valuable of all Canada's fisheries. The commercial exploitation of this resource has had an average annual landed value over the past ten years of $107 million compared to the average annual value of British Columbia's total commercial landings from all fisheries of $146 million over the same period(5). As well, two of these Pacific salmon species support one of the country's most valuable recreational fisheries, providing an estimated 3 million angler-days of high class angling opportunity(5). On top of all this, the Pacific salmon resource also provides direct food fish benefits to about 25 thousand native Indians in B.C.(5). Finally, these species provide aesthetic and nature observation experiences to tens of thousands of Canadians and non-Canadian tourists during the annual spawning migrations from the sea into the rivers and streams of British Columbia.

Over the 10-year period 1971-80, the average annual total catch of all five species combined was about 24 million fish of which 22 million (91.3%) were captured by commercial fishermen, 1.5 million (6.2%) by sport fishermen and 0.6 million (2.5%) by the Indian food fishery. There are an estimated 10 thousand commercial fishermen participants in the Pacific salmon fishery using a total of approximately 4.6 thousand vessels valued at $920 million in 1980. The estimated number of tidal salmon sport fishery participants is approximately 300 thousand and they own a pleasure boat fleet of about 130 thousand boats valued in 1980 at $840 million(5).

Problems

The problems of the British Columbia commercial salmon fishery have been well documented in the 1982 report of the Pearse Royal Commission on Pacific Fisheries(6). To quote a portion of the introduction of this report, Pearse says:

> "We have some of the world's most valuable fish resources, they are capable of yielding great economic and social benefits; yet many commercial fishermen and fishing companies are near bankruptcy, sport fishermen and Indians are preoccupied with declining opportunities to fish, and the fisheries are a heavy burden on Canadian taxpayers."
>
> "The problems now facing the Pacific fisheries are numerous, grave and very complicated. They include overfishing, conflicts among users, overexpansion of the fishing fleets, and eroding marine and freshwater habitat...Major and fundamental changes in fisheries policy are needed to correct this situation and to achieve the policy objective stated in this Commission's terms of

reference of ensuring 'that fish resources and their use make the highest possible contribution to the economic and social development of the people of Canada'."

Opportunities

Despite the apparently overwhelming problems which beset the Pacific salmon fisheries, this resource provides more opportunity for economic and social development than any other fishery resources that I am aware of in the world. The remarkable opportunity for resource stock enhancement, for rehabilitating depleted runs, for improving spawning and rearing habitats, for creating entirely new habitats, or enhancing existing ones through fertilization, obstruction removal or substrate improvement, or even manipulating genetic characteristics and behaviour of the most desired species or stocks are unique because of the anadromous nature of this remarkable family of fish. In addition, the quality of the flesh as food, the active and wild nature of the species, its diversity of geographical distribution, its willingness to pursue the angler's lure in both tidal waters and streams, and the sheer beauty of its appearance both in its natural surroundings and on the grill of a barbecue, gives the Pacific salmon an enormous potential value - in economic, social and aesthetic terms. That potential value - realizing the benefit from optimizing the existence and use of this resource - can only be achieved through a most enlightened fisheries management strategy.

Allocation is the Number One Issue

The demise of the Pacific salmon resource in this century can invariably be traced to problems of managing, or more properly stated, mis-managing allocation. The over-fishing in the commercial fishery in the early part of this century was simply an over-allocation of access to fishermen and an under-allocation to spawning escapement. Then we had problems of international allocation between fishermen of the U.S.A. and Canada which were partly solved by the negotiation of the International Pacific Salmon Fisheries Convention to handle the management of first one, and then two species originating in the region of the Fraser River watershed. These international problems have come back into prominence as greater and greater pressure for access to the salmon resource built up on the Pacific Coast. Next came allocation problems of a social nature between various types of commercial fishing gear - seine nets vs. gillnets vs. trollers - everybody trying to beat the allocation system then in effect. In the last 30 years we have had a growing number of recreational users of two species - coho and chinook - who have added their voices for allocation preferences, particularly in sheltered waters. And let's not forget the native Indians who practice their aboriginal fishery along spawning migration routes in our rivers and streams. They deplore their position far down the allocation pipeline which can deprive them of their "share" of the resource use.

Its easy to forget the spawning grounds, and the need to allocate sufficient stock of each run to escape to spawn and perpetuate the species. And on top of all these fish exploitation allocation issues, let's not forget the allocation problems concerning the alternative uses of the aquatic habitat used by salmon during part of their life cycle. For as long as man wishes to share British Columbia with the salmon resource, we are going to have environmental allocation conflicts when man logs the hillsides of the river valleys, however

carefully; or when dams are built for municipal water supply or hydro power generation; communities along with their supporting facilities of ports, industrial complexes, airports, marinas, sewage outfalls, are built along streams or on the estuaries of rivers; farms, railroads, highways, powerlines, mines - almost everything man does to develop his economic and social civilization can create an allocation issue over the salmon's estuarine and freshwater habitat.

I contend that the existing policy framework to deal with these real and growing allocation issues has failed. It is weak, badly out of date, and worst of all, the need to totally overhaul it is not well understood by many of the players.

The Need for Clear Goals

The place to start is goals. We need to understand and have general agreement on what goals are to be met through the use of the fishery resource. There's bound to be a lot of disagreement here depending on your point of view. Let's look at it from the point of view of government, who manage the resources on behalf of all of us. What are their goals? Have they thought through the issue carefully? Are they assigning the issue sufficient priority?

Let's take a look at an example of the the partial thinking that <u>can</u> take place. I'll use as an example a real situation I encountered in Pakistan about three years ago when I was with FAO.

I was asked by the Pakistan Minister of Agriculture and Fisheries if I could come out to Islamabad for a week or so to advise on the development of new fisheries in the North Arabian Sea off the coast of Baluchistan Province, which lies between Afghanistan and the Sea. As a first step, I went to talk to the fisheries experts in Karachi and learned that there was a substantial shrimp resource, largely unexploited, off the Baluchi coast. They had <u>big</u> plans for fisheries development based on this resource.

First, an Iraqui shrimp fleet which was finding slim pickings in the former excellent shrimp grounds of the Gulf in the brackish waters off the mouth of the Euphrates was looking for a new place to fish. They were prepared to pay high licence fees for the right to come into Pakistan waters to catch the valuable shrimp which would be processed on board and shipped directly to market. The Minister and his officials were getting excited about collecting a good chunk of new income for the department and government.

Second, there was a substantial deep sea trawl fleet based in Karachi and several companies there were interested in rigging their vessels for shrimp trawling, installing freezers and heading up the coast 250 to 300 miles to develop the shrimp fisheries for the benefit of the Karachi fleet and companies. They were seeking government assistance to adapt their boats and gear and they were excited about the new economic development they would create for the Karachi waterfront.

Third, there were artisanal fishermen living along the Baluchi coast with whom FAO had been working for years to improve their quite primitive boats and fishing techniques. They had just had a breakthrough in learning how to install inboard engines into a strengthened version of their fishing canoes and they

were also learning how to use their resulting longer ranging capability to begin harvesting shrimp. They were planning to establish freezing depots in the villages to hold their shrimp catch for transshipment to Karachi. The poverty-stricken fishermen of the Baluchi coast were looking forward to a level of prosperity they had never dreamed of before.

Well, what do you think the officials were advising the Minister to do --- naturally, to encourage all three developments in order to benefit everyone! The way I put it to the Minister was "You can't catch the same shrimp more than once! You have to decide how to allocate access to this shrimp resource." We examined together the issue and it all boiled down to a selection of the desired goal to fit his situation:

a) If the desired goal was to obtain new and substantial direct income to the government through leasing the use of the resource to foreigners, then the proper decision was to allocate the access to the shrimp to the Iraqui distant water fleet.

b) If the goal was to stimulate the economic development of the large vessel fleet in Karachi and enrich their owners and crew members, then allocate the use of the shrimp to them.

c) If the goal was to provide economic growth and social stability to the villagers living along the Baluchi Coast who had no other economic opportunities, then allocate the shrimp resource for their use.

One thing was clear - if you tried to satisfy all the goals at the same time and had all three fisheries competing for the resource, the result would be depletion of the shrimp stock over time to levels uneconomic for the two distant water fleets, and the impoverishment of the artisanal fishery.

Happily, the Minister was a decisive man and he opted for keeping the Iraqui fleet out and encouraging the development of the artisanal fishery because of his concern for the goal of social and economic development of the remote Baluchistan coastal region. Perhaps an overly simple example as compared to our more complex situation in British Columbia, but nevertheless a good illustration of the essential role that goal setting has with respect to fisheries allocation.

Setting goals requires knowledge of the various benefits that can be served through various allocation options, as well as knowledge of the costs associated with each option. The basic rule is that there is only a finite resource supply to be allocated for use. Also, goals change greatly depending on whether they are articulated by various user groups, by the "owners" or by different levels of government. In Canada, the federal government has ultimate responsibility for setting goals for resource conservation and exploitation in tidal waters, but the provincial government through its property rights powers under the Constitution has considerable influence on goals as they affect salmon and aquatic habitat allocation issues in freshwater.

Assuming everyone accepts that we need to establish clear goals for the management and allocation of our salmon and other fish resources, the job of getting down to the business of actual setting and agreeing on goals is a difficult one. Our allocation problems will not be solved in the simplistic

fashion of the Pakistan example I used above. All present users in British Columbia have a legitimate claim on the use of Pacific salmon and all must be involved, along with both levels of government, in developing agreement on goals governing use of the resource.

Development of Strategies on How to Achieve Goals

In the policy formulation or planning process, one needs to develop strategies as to how goals are to be achieved or how problems (issues) are to be overcome. What happens in this process is that a set of sub-goals are usually identified which provide more solid guide posts to the development of more precise plans and programs.

Applying this approach to the allocation issue, one of the primary strategies required is to understand the fisheries and ascertain their contribution to society as well as their costs. This is a planning area where there is a lot of catching up to do in the recreational use of fish. A large amount of knowledge exists about the socio-economic aspects of the commercial fisheries and thus fisheries managers feel more comfortable developing policy and programs in this sector. We need to ensure that this tremendous gap in knowledge of the socio-economic dimensions of the recreational fisheries is addressed quickly.

Another area of strategy that needs immediate attention is the development of a meaningful interaction between recreational user groups, other users and the general public with government fisheries allocation decision makers. Only through enlightened involvement and participation of all parties vying for an allocation of the resource, can meaningful policies be evolved.

These are two key areas of strategy which need to be urgently addressed. However there are a myriad of other matters which need strategic planning attention if the recreational fishery is going to receive fair treatment in future allocation decisions.

Programs Needed to Implement Strategies

Meaningful fisheries management programs in support of the allocation decision process can only be established if we first establish our goals collectively and have adopted strategies for reaching those goals. To plunge into spending money on programs without this discipline of thinking first is very wasteful and often counter-productive. I'm thinking, for instance, of many regulatory programs imposed often on very short notice which are not built on a sound basis of strategic planning.

Following the points I made under the development of strategies heading, two high priority program needs can immediately be identified to address the allocation issue. To implement the primary strategy of thoroughly understanding our recreational fisheries, we need to have a large regular program of data collection and interpretation. Particular emphasis needs to be placed on socio-economic information. The actual and potential demand for recreational fishing needs to be quantified (market surveys) and interpreted such that numbers that can be understood and compared to other user demands.

The net benefits to society from recreational fisheries urgently need to be determined by quantifying inputs and outputs so that meaningful comparisons can be made with other claimants for allocation of use of the resource.

It's important that all data are made available to the general public and user groups on a timely basis. In this modern age of electronic data banks, all of the interest groups should be able to have as much access to the data as do government officials. In this way the analysis and interpretation possibilities could be greatly expanded and a much fuller and more rapid use could be made of such information. To emphasize this point, from a simple terminal in my office here in Vancouver we can already call up information and data from all over the globe in a few minutes on most economic and business subjects - but this is not possible for fisheries data collected by our governments.

The second program area needing immediate attention is the establishment of meaningful interaction between informed user groups and government to develop and monitor allocation policy. There probably need to be several forums for such interaction. Some would be strictly among recreational users and government, but there will need to be one group, perhaps a Pacific Salmon Council, which involves all users laying claim to allocations from the resource base who would address the goals and strategies governing allocation policy.

Action by the Recreational Fisheries Participants

In order to obtain an equitable allocation of access to the Pacific salmon resources, the recreational user needs to do at least the following things:

a) Be informed

It is essential that the sport fishery participant understand the overall fisheries situation in British Columbia and the place of Pacific salmon within that setting. He must grasp the 'reality' that he will best be able to justify his right to use the resource only on factual grounds, and after the facts are marshalled, to use them to argue persuasively to win and keep that right of allocation.

b) Obtain recognition

To be most successful in obtaining a satisfactory degree of allocation, the sport fishery needs to be recognized by the general public, by other principal users and most importantly, by the resource management agencies/decision makers as an important user of the resource deserving of a fair allocation of access. The sports fishery should not rely only upon its numbers of participants (which are nevertheless impressive) to obtain a fair hearing, despite the view of Stroud et al. on political "clout"(7). It should also emphasize its willingness to pay for access, its contribution to the economy, its contribution to tourism, to social well-being and to environmental values. Putting it another way, the sport fishery needs to "earn the right" to be heard! Recognition has to be won, and it will need to be constantly nurtured because all user groups are of course doing the same thing. It's sort of like a beauty contest - there are always going to be legitimate challengers.

c) Organize effective representation

The first two actions noted above are essential prerequisites to effective representation of the views of the recreational fishermen to decision makers and to other competing users. The objective of a successful sport fishery "lobby" should be to participate along with other users in the development of fisheries management and resource utilization (allocation) policy as a leading member of the team, as well as to develop direct access to decision makers on purely recreational issues.

The successful lobbyist or representative needs to be supported by a first class secretariat which can help to assemble information, to organize arguments and briefs for representatives and to supply public communication material and support to a media relations program.

It seems to me that the Canadian Wildlife Federation and its Provincial affiliates are well placed to assist the recreational fishery community in performing all three of the actions outlined above, based on the May 1983 resolutions adopted by the CWF annual meeting(4).

Conclusion

Allocation is a central issue in the ongoing development of fisheries policy for management of Pacific salmon and all other fisheries, both in Canada and elsewhere in the world. Serious and sustained attention needs to be devoted to further developing (and in some cases, totally revamping) Canadian fisheries policy. A broad policy for Canada's commercial fisheries was hammered out during the period 1974-1975(8), followed by detailed reviews and refinement of fisheries policy issues on the Atlantic coast(9), and for the Pacific fisheries (6), in the early 1980's. All of these efforts, which were spearheaded by the federal government, have addressed commercial fisheries issues as the "centrepiece" of policy formation. One great benefit of these tremendous efforts has been the assembly of a much more complete body of knowledge and opinion than ever before.

Meanwhile, there have been several other important activities which have involved the balanced consideration of all users in a review of fisheries policy. The most notable Canadian example is in Ontario, where a process was initiated in 1974 to develop a strategic plan for Ontario fisheries jointly by officials of both levels of government which has resulted in what many consider to be a well balanced and excellent comprehensive strategy for fisheries management(10)(11). As Ken Loftus accurately reports(3), the idea at the time was to develop a regional component of a national comprehensive fisheries management strategy. That turned out to be an idea ahead of its time as the federal government agency support faded away, or more probably was diverted away by another crisis in the fisheries. It may be that the owners of our fishery resources, the Canadian public, will bring this process of national strategic policy formulation back to life if they are aware of the benefits planned management could bring to the sensible allocation, use and conservation of our fisheries heritage.

The broadest collection of views yet assembled on the subject of fisheries allocation was as a result of the FAO Technical Consultation on Allocation of Fishery Resources held in Vichy, France in the spring of 1980(12). The

conclusions and recommendations of that meeting which were reported by Jean-Louis Gaudet, Secretary of the European Inland Fisheries Advisory Commission (EIFAC) of FAO(13) included a proposed fisheries resources allocation policy statement which it suggested be incorporated into the national fishery policy of member countries. That statement, which might well be one that Canadians would wish to consider, is phrased as follows:

> "Recognizing the diversity of fishermen and their interests, it is policy to allocate a sustainable segment of the aquatic resources to each user group and, in recognition of both the dynamic and changing nature of the resource and the environment that produces it, continually review the propriety of the allocations and of the value systems on which they are based. Further, in implementing this policy, to engage vigorously in the generation, exchange and evaluation of information required for equitable allocation and perpetuation of fishery resources and their multiple values."

It is important that the recreational fishing sector properly prepare itself to influence allocation decisions concerning access to the use of Pacific salmon resources. But it is also important for all to recognize that there are other legitimate uses of the resource as well. I believe that the recreational user should take the lead in encouraging the development of comprehensive allocation, resource conservation and enhancement policies with commercial fishermen's groups and representatives of native food fishermen. Such an approach will aid governments considerably in taking decisions on allocation of fish resources and will prevent polarization of user groups which will guarantee postponement of rational decision taking.

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Fly-In Sport Fishing Industry Association of Canada

Fly-In Sport Fishing Industry

Jack Cole
First Vice President

I represent the Fly-In Sport Fishing Industry Association of Canada, that consists of 450 small businesses out there taking care of tens of thousands of sport fishermen every year, providing an opportunity for the public to fish in quiet remote areas across Canada. It's a real privilege to be here before you experts and we in our industry deeply appreciate the fine progress that professional fisheries managers have been making in recent years. Our industry provides the bulk of employment and unsubsidized private sector economic activities in certain portions of the Northwest Territories, northern Saskatchewan, northwest Ontario and northern Manitoba.

My topic is the identification of encouraging trends in maximizing the social benefits of the fisheries resource in Canada , from the viewpoint of the private sector, professional outfitters, guides and lodge owners and operators. Trend 1 is the Minister's brilliant new approaches to the preservation of streams and water-sheds. Trend 2 is the growing public acceptance across North America of certain sport fishery conservation techniques that years ago would have been frowned upon, not appreciated and not recognized; such as catch and release fishing, barbless hooks only, fishing artificials only, trophies only and restrictions on fish size taken to allow the larger brood fish to remain. All of these techniques are providing more sport fishing and more sound dollar

economic contributions by the fisheries resource. Trend 3, we are delighted with the forestry and wildlife conference in May of this year in Vancouver and its objective to develop better methods of integrating forestry and wildlife management. Trend 4, a growing acceptance of lower fish kill limits by the public. That may be hard for some of the politicians to take, but there is a growing acceptance of lowered limits of fish kill by the sport fishermen. Trend 5, is the voluntary limits established by many fishing lodge owners on what their own guests may kill and take home. In the Northwest Territories there is a large lodge that is trophy only. You kill no fish there yet they attract hundreds and hundreds of people every year. In one lake in Manitoba, the lodge owner has a no-kill policy, and at another it is trophy only. At one lodge in Saskatchewan, no grayling over two pounds are to be killed and no pike over ten pounds are to be taken unless used as a trophy. These are voluntary limits lodge owners have established themselves in areas to protect the resources. Trend 6, a growing belief that freshwater sportfishing is perhaps the most profitable and economic use of the fisheries resource in terms of jobs, business activity and net cash receipts to government. For example, in Saskatchewan, non residents spend five to six US dollars for every pound of fish that he takes home. In the Northwest Territories, the best evidence that we have there says the sportfisherman spends close to $42 per pound for fish killed. In the interior of Canada, fishing with nets, as you know, produces only forty-two cents a pound. It is estimated that for every dollars worth of fish taken in nets, it costs the government $2. I'd have to say that is our own private estimate of our industry but I think that it can be backed up quite carefully. That $2 is paid by the tax payer as you know, and it's paid by the erosion of your pension benefits and mine. Trend 7 is an awakening that in the interior, the commercial fishery subsidy is rapidly killing off that golden goose, the sport fishing industry. One lodge operator described it accurately when he said, "Jack, before long we are going to be selling out of an empty store". Trend 8, the awakening that as timber becomes more costly to cut; most of it is now sold below cost and at a loss to the tax payer. Subsidized timber cutting does provide employment for a while, but there are costs in terms of fishery depletion, loss of food, loss of tourism dollars, water shed destruction and lower water flow for downstream agriculture and municipal uses. Trend 9, there is more preservation awareness by a few top timber and oil executives of the importance of fish and wildlife. I find that some of these top men of these outfits love to fish and hunt but they live in their ivory towers. They subscribe to conservation but all those good intentions get blown away somewhere down the line by the guys doing the work. Trend 10, the recognition that every million dollars brought across the border by the visiting sport fisherman is actually pure gold for Canada as a valuable cure for Canada's balance of trade. Trend 11, is a growing understanding by many that sport fishing by tourists in Canada is a highly competitive business. And there are growing opportunities in the United States, where they have set aside thousands of miles of rivers and streams and millions of acres of forests and mountains and millions of acres of lakes that are being managed for sportfishing. The only way that we can continue to attract the tourism gold to Canada is to provide the opportunity for the tourist to see and hook a few large fish. Ladies and gentlemen, they can catch as many fish down there as they can here. But the big fish that they come and spend their tens of millions of dollars for are here now, and we have to preserve those big fish, like the lodge operators do by setting their own limits to preserve those big fish. Trend 12, a Winnipeg firm is developing true life trophy reproductions based on a photograph and good measurements. We are thrilled in the fly-in fishing lodge business because we don't have to kill any fish.

In closing, we have a couple of things we would like to ask you to help on. First, we would like to see more publicity and encouragement to the importance of catch and release fishing, and other restrictive methods of sport fishing. Second, once we get to catch and release, we need to teach the public how to release a fish. A few things like that will help preserve what we believe is Canada's most valuable long term economic resource, sport fishing.

Discussion

Ken Cox: Mr. Cole, could you tell us about the organizational structure of your Association, the percentage of your clientele that is US vs. Canadian, do they have the same attitude towards catch release, and what is your membership fee?

Jack Cole: The leaders of our industry support catch and release and/or limited catch, and close to two thirds of them have such a policy. Regarding attitude, the American angler has had a lot more publicity and a lot more education about the value of catch and release fishing.

There are about four hundred and fifty fly-in fishing lodges in Canada and we hope to have about 25 to 30% of them as members of our Association. We represent probably about 80% of the dollar volume in the industry, but there are a lot of small operators out there that need our help. Our membership fee is $200.00.

Gil Radonski: I would like to point out that nearly all fishing in the freshwaters of the United States is recreational. There are some commercial fisheries on large rivers and on the Great Lakes, but recreational fishermen are trying to stop commercial fishing in northern Minnesota on two large lakes, Lake of the Woods and Rainy Lake. This year, for the first time, recreational fishermen will pay a surtax of $2.05 on their fishing licence in Minnesota to begin a buy back program to buy out the commercial fishermen in those lakes.

With respect to catch and release, I agree totally that we need a great deal of education to make catch and release work. We need to learn from our experience watching situations where anglers could not keep any of their catch because of contamination but could still fish. This happened on the Shenandoah River in Virginia where they had a mercury contamination problem, they could fish but they could not keep the catch. It also happened on Lake St. Clair where they had a mercury contamination problem; you could fish but you could not keep the catch, and I could go on with several more examples. Consistently, we have found fishing pressure dropped off 80% when people could not keep at least some part of their catch. Maybe the more affluent fishermen that go in for fly-in fishing are better sportsmen if you want to use that term, or are better educated on the need for preserving fish populations.

Bob Wright: I concur with Gil Radonski's catch and release observations. I also want to respond from my own experience to Ken Cox's question regarding profitability and potential of the Pacific Coast sport fish industry. I had a dream about five years ago when I bought this old survey ship, the "W.J. Stewart", and I put it in Ucluelet on the west coast. Really what happened is that in about 1974 I'd gone down to a place called Westport in the State of Washington and looked at the industry down there that generated $45 million a year. I thought in Vancouver there is just unlimited opportunity. So I bought

this ship and that was the cheapest thing I ever did. Two million dollars later, we opened. The first summer I lost 518 thousand dollars without depreciation or interest. Well I thought, nobody is going to buy this pile of junk from me and nobody is going fishing, what do I do? The second year I lost 285 thousand dollars, the third year 117 thousand dollars, and we were out buying champagne because we only lost $13,000 this year. The interesting thing is that on Wednesday, I went down to get another boat, built by Canadians, a 57 footer. I've got a crew moving in to Ucluelet where we are starting in the first of a $10 million shore operation. Ten million dollars is what we are expending there in the next ten years. We found a secret, and that was that we followed Max Ward. I followed Max Ward and last September I went to Jimmy Pattison here and I chartered a 727 ... and we turned away, I think it was 188 people. The secret was price, give them good quality and fly them in. Now we haven't even started our advertising campaign for this year yet and I've got 616 signed up and we have booked 65 flights into this ship on the west coast. But I'd have starved to death if I'd have tried to flag them in off the street, you know, the old camera around my neck and trying to sell the place up, forget it. I'm offering fly-in fishing trips at $199. We start our marketing program in about another ten days and we are going to totally sell out, that I can tell you right now. Now in the meantime, so we don't kill the resource, from March 9 through until the first of June, we are whale watching only and we are bringing them in by bus. We'll have them sold right out. So it's a case of marketing the product in an aggressive way, making sure they price is right, making sure the service is right and they become your best advertising. Now, not to dwell too long on this, I've run a boat up in the Hakai Pass the last 6 or 7 years. That started from my love of fishing. It got so bad last year that they were kicking me off my own ship because my manager is on a profit sharing plan and I kept finding I couldn't get into my own ship and so they build me my own cabin. We bring in 24 people at a time, flying in from Vancouver. We haven't started our marketing yet and we are 78% sold out for this year. The third thing I want to say to you is that I've been meeting with my Indian friends, and I've been invited up to the reserves at Alert Bay because they are looking at the economic possibilities of sport fishing and, as I said, they have a mother lode up there. Properly managed, properly marketed, they can't go wrong. So there is gold in "them thar waters" if you market it the right way. With respect to my own operation, we also put out our own little newspaper. And I get probably a thousand requests a year to be put on a subscription list. It's really an advertising sheet, but we make it look like a newspaper. We put out our last issue, which was 66,000 copies. Now I've got a computer that I can only get 33,000 on our mailing list but they are goodies, and I tell you it really works, so management has a little bit to do with it.

Bill Bryson: I have a dual question. I would like Mr. Wright to expand on the $199 fly-in rate because this year we have started to package fly-in fishing for our Nova Scotia outfitters. Also, do you have the problem with marketing your seasons because of regulations and timing?

Bob Wright: This is of real interest because the people that set these policies are here, whether it is in Nova Scotia or British Columbia. We have one hell of a problem, if we don't fight. You know there will be regulations come down that may come in on, let's just say the 15th of May, and we have everything booked in. We've spent all our money and we've ordered all our planes and then some manager of the resource says, "hey, we got to close that down", or "we've got to cut the catch limit". Jees, I got to tell you, I mean, just everything blew

apart. Some of the Ma and Pa operations that happened to are still on welfare. So what we tried to say to the Department was, look, whatever you do, when you change regulations, give us a year's lead time because by the time you come up with the brilliant idea of cutting us down, we have spent all our marketing money, we've hired all our staff, we've done all our booking, we not only have done that, we've got the deposits of the people and we've spent the deposits. And then some customer says what the hell, I was coming in here for four salmon for one day, so I pass. So, give the operators a year's lead time if you are changing the rules.

On the $199.00, we tried all sorts of different things and what we really did was say, alright, we've got to go for price. When I put that ship up at Ucluelet, I had the idea we have a national park there, there are 800,000 people a year coming in to the Pacific Rim Park, and in two years there is going to be over a million, and it is going to be bigger than Banff or Niagara Falls. Well, I doubt if there are 400,000 going in there. They are all campers and they are not going to spend $50.00 at my operation. So that's when we decided to go outside, market our own in the States, in western Canada. What we did is, we said, what is the cheapest price that we can afford to bring them in and hope that they are going to be high rollers and big shooters as far as T-bone steaks and so on. We are going to get the full mark-up on that, so what we really do is we shave the price of the plane, the price of the ship, and we do it by volume. We have to be full or we loose our shirt.

Finally, I am concerned with what the Canadian Wildlife Federation meant by use of the magic word allocation in their presentations. It's a harmless sounding word, but it can have sinister consequences if it is used the wrong way. Because if allocation comes here in B.C. where they can shut us down on August 15 like they did in Oregon or Washington, I'm out of business.

Bob Martin: I think we tried to make clear that we are concerned with recreational use of aquatic systems rather than strictly sport fishing. We tried to make the point that our top priority was looking after the ecosystem, the resource and the allocation necessary to achieve that purpose, and then at the end of the line, the allocation of the resource explicitly in quantitative terms to the various users.

Tom Davis: I'm curious as to the Canadian Wildlife Federation proposal to represent the sport fishing interests across Canada, but I'm equally curious how you plan representing us here on the west coast. There is no real organizational setup to deal with it and by the time you grapple with the question of allocation, our resource here isn't going to be in any state to worry about allocating it to anybody. What I'm telling you is we don't have time here to wait for that type of organizational structure to be in place.

Bob Martin: We are a national organization and we feel that a national policy should be developed in allocating the resource, but that does not mean that any allocation here is going to be done from somewhere outside of British Columbia. I think that any allocation here will have to be done by people who understand the fishery out here. What we are proposing I think is a management scheme in which allocation will play the primary role. We haven't set up any structure We've only developed ideas. We are saying it is a long term goal and we think that to manage our recreational fish species properly that allocating them by explicit numbers is the only way we can go in the long term.

Ken Loftus: We propose to tackle this old problem from a national perspective with the understanding that the provincial affiliates of the Canadian Wildlife Federation would be carrying the primary role insofar as local regional problems are concerned. But we felt that, over and above the input at the provincial level, it is important to have an input at the national level where there is strong input from commercial fishery representatives and from native peoples, but very weak representation of recreational uses of the resource.

Dick Thompson: As the Oregon/Washington experience has been mentioned, I would like to explain that it is very complex. That system was forced upon managers by the federal courts in terms of the Indian/non-Indian allocation. There is the realization that the time available for the recreational fishery affects the supporting industry and so in the plan coming up for '84 and for '85, one of the major objectives is to extend the season to include our Memorial Day weekend, the end of May, which is the start of the fishing season, and our Labour Day weekend, which is the first Monday in September. The catch per day is also going to be adjusted with the objective of trying to extend the season over those two periods. Consideration of the supporting industry is now a part of the fishery management plan.

Ed Mankelow: With respect to the Pacific fishery, one of the reasons I think that the Canadian Wildlife Federation have come up with their plan is simply because of the concerns expressed by delegates like myself from British Columbia. As far as the west is concerned, we know they don't have time. I don't know if we've got time, and there is no short term plan. We are going to have to handle it from the west and we are going to have to handle it as best we can but the point is, I found by going back to Ottawa from here, that they didn't seem to know what was going on out here. Certainly the things that we were telling the Department of Fisheries and Oceans here didn't seem to be getting back there as far as policies were concerned. So we wanted the Canadian Wildlife Federation, as a national body in Ottawa, to express those concerns nationally and I guess out of this came this plan. The plan is just a plan but we've got to start somewhere. It isn't going to answer our problems, we're going to have to do that ourselves.

Bob Wright: I'm delighted to hear that. It seems that there is a consensus here that Ottawa doesn't know what is happening. I will let that sink in for a while, and I'm delighted that the Wildlife Federation shares our views.

Art Holder: Although you people here are concerned with the federal agency as the allocation mechanism in offshore waters, in the freshwater situation the province is the allocation mechanism. So there is no way that you can take a detailed allocation approach developed by the Canadian Wildlife Federation and adopt it nationwide. It has to be handled on a regional basis and I think you have to pick out some of the commonalities, some of the common issues, and bring them to the attention of whatever government agencies are involved. I don't think we will make much progress if we get bogged down in specific allocation problems in this conference.

The Atlantic Salmon Federation

The Atlantic Salmon - A Social Welfare Species

W.M. Carter
Executive Director

"The Atlantic salmon resource appears to be at a point where drastic measures are deemed necessary in order to reserve the alarming decline in abundance.

Expectations for salmon abundance in 1984 give little hope for improvement in the short term or longer term unless actions are taken to allow for fish to spawn. Even if major changes were to occur in the coming season, we can expect to see very dismal returns for the next five years.

It is clear that the current production of wild salmon is well below present catching capacity and that our present commercial fisheries are heavily dependent upon mixed stocks which are extremely difficult to manage".

With this statement, Dr. Barry Muir, Chairman of the Atlantic Salmon Task Group, introduced a package of alternatives to present management and allocation measures, in December 1983.

Not for some time has such a frank and honest assessment of Atlantic salmon resources been presented by Fisheries and Oceans Canada.

However, while Dr. Muir outlined the present state of the Atlantic salmon with clarity and candor, he did not assess the cause of the problem; that was not a part of his mandate. What does emerge clearly from Dr. Muir's report is that the resource can only recover if dramatic changes are made to present management policies, and those changes become part of a new long-term management plan.

While the present Atlantic salmon crisis is serious, it is not new. A review of the historical literature, particularly the annual reports of the Commissioners of Fisheries for the Province of Lower Canada, and reports of the Crown Commissioners for Canada in the mid-nineteenth century, reveals a chronic pattern of declining catches and repeated calls for management reforms. Since 1930, when a peak catch of 13.5 million pounds was recorded, the trend has been steadily down. (Figure 1).

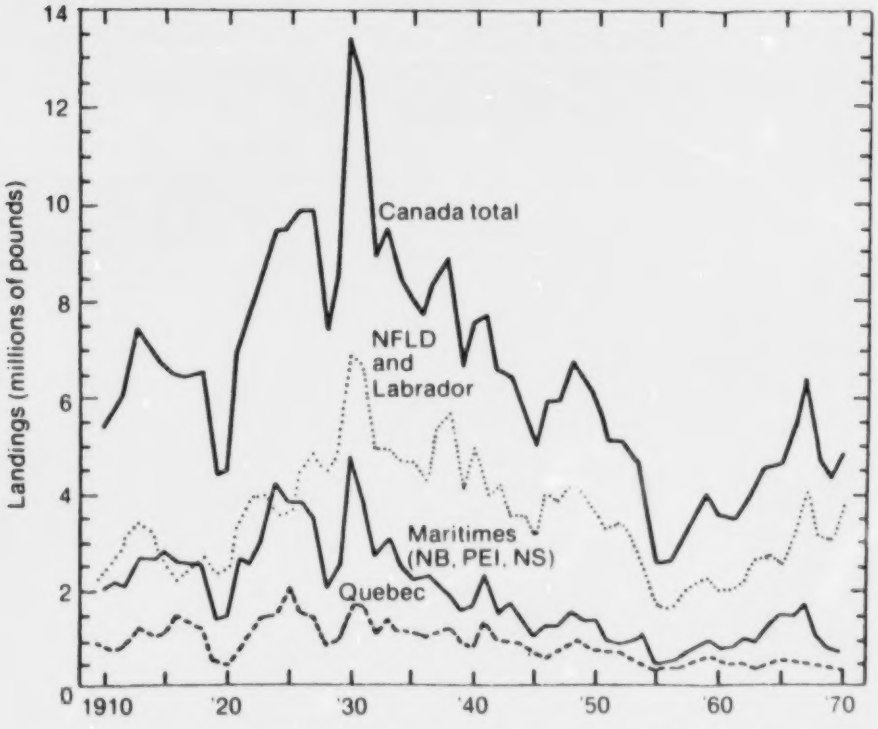

Figure 1. Commercial salmon landings on the Canadian east coast since 1910. Figure from May & Lear (1971).

The Atlantic salmon has been an important component of the multi-species commercial fisheries of the Atlantic region since Canada was colonized. While the average income of salmon fishermen has been relatively low ($1500 in Newfoundland/Labrador in 1983, and rarely exceeded $3000 over the past 30 years), salmon is one of the first species inshore fishermen can exploit at the end of a long, ice-bound winter when the pantry may be almost bare. A salmon fishing license was thus an eagerly sought after and easily available privilege, or political perk.

Not until the late 1950's was any serious attempt made to limit allocation, and then it was badly botched.

Advent of the Greenland commercial salmon fishery in the early 1950's added severe exploitation pressure on Canadian salmon stocks. In 1971, the catch at West Greenland peaked at 5,765,000 pounds: 760,000 salmon of 8 lb. average weight. Approximately 50% of the salmon caught at West Greenland are of North American (Canadian) origin.

To compensate for this additional drain on depleting salmon stocks, the Canadian government imposed a moratorium on commercial salmon fishing in New Brunswick, the Gaspé Peninsula and the western section of the Québec North Shore (west of Sept-Isles) in 1972, as well as permanently closing the Port-aux-Basques driftnet fishery on Newfoundland's southwest coast.

The moratorium remained in effect from 1972-80. It was not extended to Newfoundland, even though it was well documented that a proportion of the Newfoundland catch was salmon of non-Newfoundland origin. Tagging studies conducted between 1969-75 estimated that an average of 24.6% of the Newfoundland-Labrador salmon harvest by weight was based on non-Newfoundland-Labrador fish.

At one point while the moratorium was in effect in New Brunswick and Québec, the number of gear units licensed for salmon in Newfoundland increased from 13,500 to 25,000. (Figure 2)

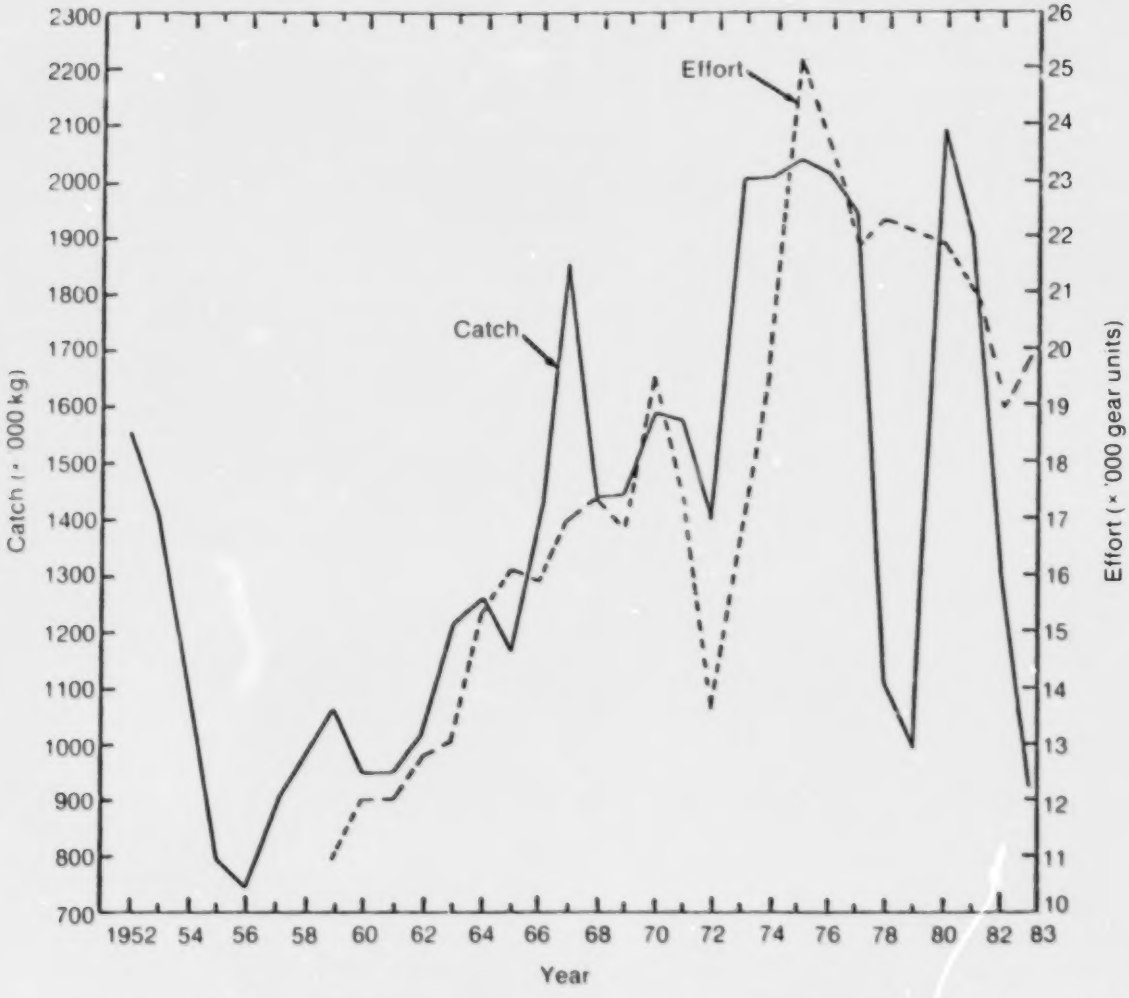

Figure 2. Atlantic salmon commercial catch and effort data in Newfoundland and Labrador. 1952-83

Obviously, management decisions at the time did not adhere to available scientific advice. Such a contradictory management policy could only have been dictated by socio-political considerations.

Concurrently, a major increase in licensing for inshore non-salmon species was allowed, even though it was known that a substantial portion of this incidental catch was in the form of Atlantic salmon. It has been estimated that the salmon catch by incidental fisheries during the last years of the moratorium exceeded the legal pre-moratorium catch.

Salmon management policy has never been dictated by economic considerations. The determining factor in the allocation process has been rooted in social and political concerns, at considerable negative cost to the Canadian taxpayers, and to the biological detriment of the salmon. In the past, management strategy has been to maximize access to the commercial salmon fishing sector as a substitute for unemployment insurance payments. That may be an admirable social goal, but it has proven to be a disastrous one for salmon. Increasing the number of fishermen has not solved low income problems among fishermen, and it has excerbated the pressure on depleting fish stocks.

It is time that the greatest economic return become the primary factor in allocation policies for fisheries. Where there is individual economic hardship, a country as wealthy as Canada can respond to that need through existing unemployment, training or welfare programs. Social problems should not be solved on the back of declining salmon stocks.

No absolute figures for the relative economic values of the recreational and the commercial Atlantic salmon fishery have yet been produced, but repeated estimates have clearly shown that the economic return from salmon angling is vastly higher than the commercial return. In 1956, Professor Georges Maheux estimated the value of the sportfishery in Québec at $158 per salmon, the commercial fishery $6.80. In 1966, Carter and Heyland fixed the figures at $214 and $6.63. Based on total expenditures for salmon fishing in New Brunswick from the 1980 National Angler Survey, Dr. Muir estimates the economic impact per angled salmon at $330 in 1983 dollars.

In a survey of expenditures by anglers on the Ristigouche River for 1982, the Atlantic Salmon Federation estimated direct expenditures by the angling industry at $3,834,000 ($727 per salmon caught). Indirect expenditure accounted for an additional $4.2 million. During the same period, 355 people (118.4 person years) were employed directly by the angling industry as guides, wardens, camp staff, etc. (Appendix I). This is equivalent to a large factory in an area where there is little other industry. Clearly, catching salmon on a fly creates far greater wealth than snaring him in a net.

A second compelling argument for re-evaluating the allocation priorities in the Atlantic salmon fishery is biological. We do not have production data for all Atlantic salmon rivers, but where we do have it, the message is ominous. The Canadian Atlantic Fisheries Scientific Advisory Committee (CAFSAC), in its Advisory Document 83/23, states, ... **"Estimated spawning escapements in 1983 were below previous years and below target levels in most rivers...the low abundance of grilse in 1983 suggests a lower abundance of two sea-winter salmon in 1984...a number of salmon stocks in New Brunswick, Nova Scotia and Western Newfoundland are producing considerably below optimum, and if spawning requirements are to be met, there will only be a small available harvest".**

Simply, the message is that not enough large salmon are surviving to spawn, and fishing pressures must be relaxed in order to correct this unacceptable biological imbalance.

Historically, 80-90% of the annual world catch of Atlantic salmon is taken in commercial fishermen's gear. The remainder, averaging 10-20%, is taken by anglers and creates economic value many times greater than the 80-90% captured commercially.

New management policy, which recognizes the economic importance and job creation supported by salmon angling, should dictate that more salmon will be caught in future by anglers and fewer by commercial fishermen. The biological benefit of this allocation policy change will be a natural enhancement program which will produce substantial numbers of additional salmon through increased spawning escapement, without costing anything. On the contrary, the increased angling allocation which would flow from this policy change would result in substantial angler-revenue increases, generating more than sufficient money to provide more protection for spawning stocks.

The crisis of Atlantic salmon is a crisis of stock management, not biology. The Atlantic salmon has been the victim of historic management policies which viewed the resource as a supplement to welfare and unemployment programs. The consequence has been overfishing and persistent stock depletion. The problem can only be rectified by a reversal of current allocation priorities for the commercial and the recreational fishery.

Appendix I

Economic Implications of the Recreational Atlantic Salmon Fishery of the Ristigouche River Watershed (1982)

Prepared by E. LeBlanc, Atlantic Salmon Federation, January 1984

Information sources	Jobs created	Person years of employment (see Appendix I, D) for details)	Local Expenditure		
			Wages	Other expenditure	Totals
New Brunswick Crown Leases (See Appendix I, A) for details)	148	49.3	$ 917,000	$ 653,000	$1,570,000
Private Landowners (see Appendix I, B) (ii) for details)	20	6.7	134,000	107,000	241,000
Private Clubs (see Appendix I, B)(i) for details)	113	37.7	450,000	366,000	816,000
Ristigouche Riparian Assoc. survey (see Appendix I, C) for details)	36	12.0	228,000	172,000	400,000
Ministere du Loisir de la Chasse et de la Pêche (see Appendix I B) (iii) for details)	38	12.7	330,000	95,000	425,000
Government Controlled Recreational Fishery (see Appendix I, B) (iv) for details)	0	0	0	382,000	382,000
TOTALS	**355**	**118.4**	**$2,059,000**	**$1,775,000**	**$3,834,000**

In total, the fishery is directly responsible for the annual creation of at least 355 jobs (118.4 p/y) and the infusion of at least $3,834,000 into the area. If all factors were considered (see Appendix II), the overall economic impact of the recreational fishery could easily be in the range of 250 person years and $8,000,000 annually.

Information Included

A) New Brunswick Department of Natural Resources Crown Lease Statistics, 1982.
- includes the following camps: Grog Island, Runnymede, Toad Brook, Cheuters Brook, Red Pine Mountain (Two Brooks), Tom's Brook, Pine Island (Red Pine), Downs Gulch, Cluett's Lodge (Upsalquitch River), Two Brooks (Upsalquitch River), Fraser's Lodge (Kedgwick River).

B) Ministere du Loisir de la Chasse et de la Pêche (MLCP), Working Document: The Salmon Fishery of the Ristigouche River Watershed (La Pêche du Saumon dans le Bassin Hydrographique de la Riviere Ristigouche), December 1982.
NOTE: Figures in this document were in 1981 dollars. A 10% inflationary increase has been added to all dollar values to produce 1982 figures.
- includes the following camps:
  (i) Private Clubs - Ristigouche Salmon Club (Matapedia and Indian House Lodges), Cold Spring Brook (Club de la Source Fraîche), Tobique Lodge (Club des Francs Pêcheurs).
  (ii) Private Landowners - Brunswick Lodge (Pinkham's)*, Brandy Brook, Silver Waters, Camp Harmony,
- also includes:
  (iii) MLCP expenses and jobs (or parts of jobs) resulting from the recreational Ristigouche salmon fishery.
  (iv) Monies spent in the area by individuals fishing government controlled Québec waters of the Ristigouche watershed (similar to New Brunswick Crown Reserve waters).

C) Ristigouche Riparian Association, Survey of Camp Expenditures, 1977 season.
- includes the following camps which are not accounted for elsewhere: Flats (Glen Eden), Kedgwick Lodge, Boland Brook, Carter Hall Lodge.

D) Figures for the number of person years (P/Y) are based on an average annual employment period of 4 months.

Information Not Included

A) NEW BRUNSWICK
  (i) Money spent locally by fishermen exploiting Crown Reserve (daily or other) waters.
  (ii) Money acquired by the provincial government from licence/crown reserve fees.
  (iii) Provincial/Federal government jobs (or parts of jobs) generated as a result of the recreational Atlantic salmon fishery of the Ristigouche watershed.
  (iv) Jobs created/expenditures by the following camps: Red Bank, Larry's Gulch, Sewall's Lodge (Upsalquitch River), Watiqua Lodge (Upsalquitch River), Boston Brook Lodge (Little Main Ristigouche).
  (v)** Spin-off benefits (all monies mentioned are new dollars being brought into the local economy from outside sources).

B) QUEBEC
  (i) Money acquired by the provincial government from license/crown reserve (ZEC) fees.
  (ii)** Spin-off benefits (all monies mentioned are new dollars being brought into the local economy from outside sources).

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* Although Brunswick Lodge is on the New Brunswick side of the river, information was obtained from the Québec working document.

**The spin-off benefits of both the New Brunswick and Québec recreational salmon fisheries of the Ristigouche River watershed should be considered as a major part of the overall economic impact.

Canadian Sport Fishing Institute

A Proposal for a "National Sport Fishing Conservation Fund"

P.A. Larkin

on behalf of

J.P. Guerrier

Introduction

The 1980 National Sport Fishing Survey conducted by the Department of Fisheries and Oceans, in cooperation with the provinces, will show, when published, that the sport fishing industry generated expenditures of $2.4 billion during that year.

Expenditures by close to 4.9 million adults included food, lodging, transportation and related services. Important items in expenditures by anglers were the purchase of fishing tackle and outboard motors. The 1980 survey will show that $194 million was spent in Canada by resident and non-resident anglers on fishing gears (including bait). This represents 8.4% of all expenditures.

Another insight into the expenditures involving fishing tackle and outboard motors can be gained from data on imports into Canada.

The purpose of this paper is to review the importation of sport fishing tackle and outboard motors into Canada, to examine the revenue collected by the federal government on those imports, and to make recommendations to the federal government.

The two main exporters to Canada are Japan and the USA. During the past five years, the USA exported to Canada more than four times as much as Taiwan and South Korea combined.

Government Revenues from Sport Fishing Tackle

Data compiled by Statistics Canada show that in 1982, by order of importance, the main countries exporting fishing tackle to Canada were: the United States of America (USA), South Korea, Taiwan, Japan and France (Table 1).

Table 1. Values of imports of sport fishing tackle into Canada (millions of dollars).*

Countries	Years							
	1975	1976	1977	1978	1979	1980	1981	1982
France	1.2	1.1	1.1	1.1	1.3	1.9	2.6	1.1
Japan	2.6	2.7	3.8	3.2	3.5	3.4	3.7	3.1
South Korea	0.8	0.9	2.0	2.0	3.7	5.4	5.2	4.6
Taiwan	0.7	0.8	1.4	1.3	2.2	2.7	3.3	3.1
USA	8.4	12.2	9.9	13.5	14.1	13.5	13.7	11.4
Others	2.2	2.5	2.9	2.4	3.0	3.0	2.8	2.8
Totals	15.9	20.2	21.1	23.5	27.8	29.9	31.3	26.1

*Data from Statistics Canada, User Advisory Services Catalogue 65-207 for corresponding years.

The two countries that have traditionally exported fishing tackle to Canada, the United States and Japan, now have important competitors in South Korea and Taiwan. The declared value of the imports from South Korea and Taiwan increased by 51.3% from 1975 to 1982. During the same period, the value of imports from the USA and Japan increased by only 13.6% and 11.9% respectively. In 1975, imports from Japan were almost four times higher than that of Taiwan and South Korea; in 1982, South Korea topped Japan.

Statistics Canada includes several classes of commodities under fishing tackle: fishing rod blanks (unfinished); fishing rods; parts of fishing rods; reels; lines; hooks; sinkers; nets; tackle boxes; and other fishing tackle items. Without going into great detail, in 1982: most unfinished rods were imported from the USA; fishing rods (finished) from Taiwan, South Korea and the USA; parts of fishing rods, from the USA; reels, from Japan, South Korea and the USA; lines, from the USA and Germany; hooks, from the USA, France and Taiwan; nets, from the USA, South Korea and Taiwan; tackle boxes, mostly from the USA; other items, from the USA, Japan, Taiwan and South Korea.

The total value of imports from sport fishing in Canada was $26.1 million in 1982. This is the value declared at Canadian Customs, not the price paid by anglers at retail stores. The average annual value during the five year period 1978 to 1982 inclusive was $27.7 million. Thus, during the eight years, 1975 to 1982, Canada imported a total of $195.8 million worth of sport fishing tackle, of which 5.8% came from France, 13.3% from Japan, 12.6% from South Korea, 7.9% from Taiwan, and 19.4% from the USA. All imports from other countries represented only 11.0%.

The federal government collected duty and sales tax from these imports at the following rates: if the basic material is wood, the duty is 12.1%; if glass or metal, 13.9%; if plastic, 15.5%; to the value plus the duty a 9% sales tax is added. Therefore, in 1982 the federal government collected $3.7 million in duty on fishing tackle imports and $2.7 million in sales tax, for a total of $6.4 million.

In addition, Canadian manufacturers of fishing tackle produced $11.1 million worth of fishing tackle (1981 figure), on which a 9% federal sales tax was paid, yielding a further revenue to the federal government of $1 million.

Government Revenues from Outboard Motors

Outboard motors of all sizes, propelled by gasoline or by electricity, occupy an important place in sport fishing activities. Most trade names of outboard motors have a business address in Canada. Some are imported in parts and assembled in Canada; others are imported assembled, ready for use.

Statistics Canada data (Table 2) show that during the period 1975 to 1982 inclusive, the total was $54.4 million with an average of $10.9 million per year. In 1982 the value was $11.5 million.

The two main exporters to Canada are Japan and the USA. During the past five years, the USA exported to Canada more than four times as much in value as Japan, and almost three times as many units (70,096 to 23,895).

Table 2. Value of Imports of Outboard Motors into Canada (millions of dollars)*

	Years							
Countries	1975	1976	1977	1978	1979	1980	1981	1982
Japan	0.3	0.3	1.0	2.3	1.6	1.0	1.5	3.0
USA	7.1	5.1	4.5	7.1	8.7	9.2	10.7	8.0
Others **	0.3	0.8	0.1	0.5	0.3	0.0	0.0	0.5
Totals	7.7	6.2	5.6	9.9	10.6	10.2	12.2	11.5

* Data from Statistics Canada User Advisory Services, Catalogue 65-207 for corresponding year.

** Other countries include: United Kingdom, Belgium and Luxemburg, West Germany, Hong Kong, Sweden, USSR and Australia

Among other countries that exported outboard motors to Canada, Hong Kong exported 40 units in 1980 at a value of $7,972. In 1981, the USSR exported one unit with a value of $1,446.

The federal government collects 11.4% duty on the declared value of outboard motors and adds a 9% sales tax. Therefore, in 1982, the federal government collected $1.3 million in duty, plus $1.2 million in sales tax, for a total of $2.5 million.

Adding it up

In 1982, the federal government collected $6.4 million on duty and sales tax on fishing tackle imports and $1 million on sales tax on fishing tackle produced by Canadian manufacturers. In addition, the federal government collected $2.5 million on duty and sales tax on imported outboard motors. In total, the visible revenue from fishing tackle and motors was nearly $10 million in 1982.

Also, in addition, the federal government received revenues in the form of income tax from companies importing into Canada and operating in Canada; income tax from salesmen and dealers; income tax and sales tax from manufacturers of fishing tackle in Canada; sales tax on gasoline for vehicle and outboard motors, duty and sales tax on imported boats; sales tax on boats manufactured in Canada; and income tax from bush pilots, fishing camp operators, and many other sport fishing related resources.

Recommendations

The foregoing prompts a question: What portion of the millions of dollars collected by the federal government from angling activities is returned to anglers in the form of contributions to research and management for the betterment of game fish habitat and game fish populations?

To increase expenditures by the federal government on sport fisheries, it is recommended that:

1. There be established a "National Sport Fishing Conservation Fund" to receive revenues as follows:

    a) Fifty percent of the federal government revenues from duty and sales tax on imported fishing tackle and sales tax on fishing tackle of Canadian manufacture.

    b) A surtax of 10 percent on all imported fishing tackle.

    c) Twenty-five percent of the federal government revenues from duty and sales taxes on imported outboard motors and parts.

2. Disbursements from the National Sport Fishing Conservation Fund would be made to provincial government agencies, universities, or public organizations for financing research or management projects, the disbursements to be roughly in proportion to the annual sport fish licence sales in the various provinces; and, subject to the approval of the Department of Fisheries and Oceans, disbursements to provincial government agencies would be on the condition that matching funds were provided.

3. Monies from the fund not expended in a given year would be carried forward.

If these recommendations were followed, the National Sport Fishing Conservation Fund would receive roughly $6.5 million per year, an amount of money that, wisely used, would have a significant impact on the quality of sport fishing in Canada in the future.

Discussion

Doug Brown: With reference to Dr. Carter's paper, was there not an increase in anglers during the commercial ban in Nova Scotia and New Brunswick, and to what extent do you consider that to be a problem? Also, I guess I took exception to a certain extent to your depiction of the commercial salmon fishery as a sort of a social welfare measure. There are 5,300 licenced commercial fishermen in Newfoundland and on an average their individual incomes don't amount to a lot, but I think you have to break that down by region. On the Labrador coast, salmon is one of the most important species of all and in a number of communities and locations at least 50% of the value of the commercial catch of all species is salmon. And I think it is important to understand that their salmon catch is but one of a multi-species fishery prosecuted by inshore fishermen; the income salmon generate is not necessarily very large for some fishermen, but it is one of a cycle of fisheries, and if you take one fishery away, it erodes the total so I think it doesn't help to characterise it as a social fishery.

Wilf Carter: Yes, there was an increase in the licence sales to anglers during that period but I gave proportions for the commercial fishery and the angling fishery and overall, those proportions are valid. In New Brunswick I believe the catch of Atlantic salmon by anglers is almost equal to the catch in the commercial fishery.

You are entitled to take exception to my views but the facts are there. I said in my remarks that the salmon fishery was part of a multi-species fishery and that often it was the first species that could be caught by fishermen in Newfoundland and Labrador in the spring and for that reason particularly important to them. I understand that and I appreciate it, but my reference to salmon as a social welfare species has to stand because in fact this is very much what is it is being used for and this is what has contributed to the problem. I don't think we can escape the fact that there have been roughly 6,000 commercial fishermen in Newfoundland taking large numbers of salmon. Salmon is important to them, I agree with that, but I think there should be other ways we can address those problems rather then by continuing to allow too many salmon to be taken out of the sea by commercial fisheries to compensate for lack of income from other sources. This is no way a reflection on the individual who is taking them. If I was a commercial fisherman living in those remote communities I'd be doing the same thing. I'm not blaming the fishermen, I'm blaming the Government for it's historic management policy which has allowed that to happen and which has brought salmon into the state they are today.

Bob Martin: I think it would be useful to hear from Dr. Carter on the effectiveness of the Atlantic Salmon Advisory Board.

Wilf Carter: I think that I have very little enthusiasm for the Atlantic Salmon Advisory Board. The jury is still out as far as I'm concerned. The problem that we have in Canada is that the private sector, the non-government sector, does not have as good an opportunity for involvement in determining policy in Canada as there is in the U.S. fishery. The mechanism is very important and we don't have as good a mechanism as they have and I'd like to see how we can address that.

The problem with the Salmon Board is that it was too insulated from the Minister. Decisions are too frequently made at the bureaucratic level and not often enough at the scientific and management level. The Minister is insulated from the direct input of public opinion represented by private sector groups. In other words, before you get your message to the Minister, you get a whole series of letters acknowledging receipt of your letter to the Minister and that it will be brought to his attention at the earliest opportunity. That has been the problem with the Salmon Advisory Board and with a lot of others.

Archie Tuomi, General Chairman

By way of introduction to the next presentation, it should be repeated that it is beyond our purview to discuss native rights, native claims, or native food fisheries as such. Rather, we are here to talk about the economic development and potential of sport fisheries that are either owned, managed or controlled by native groups.

Native Fisheries Owner Group

Lorne Anderson
Senior Project Officer, Resource Development
Department of Indian and Northern Affairs

We are pleased to be here as this is the first time that either the department or native lodge owners have been invited to participate in any of these conferences. Hopefully it won't be the last because there are some things that we can contribute to the policy for 1990's and Indian people are quite excited about the economic opportunities that the sport fishery can offer them in the coming years. I am with the Resource/Economic and Employment Development Branch of the Indian and Inuit Affairs Program. Our basic objective within the branch is to increase Indian employment, reduce Indian dependency, increase the number of Indian businesses and increase the developmental capacity of Indian and Inuit communities. We do this in several ways through technical expertise in various areas. We are decentralized and we have people, such as tourism officers, in various regions. We also provide contributions, we have a loan service and we provide loan guarantees to Indian businessmen. We are a lender of last resort and we encourage Indian people to borrow from the banks where possible. But in many ways, the Indian Act is restricted to Indian people and banks don't like to lend money to businesses on reserves where they feel they may have difficulty getting their money back if there is a problem. Most of you know Indian people play a fairly significant role in the sport fishery but it is largely limited to employment in non-Indian owned and operated camps, as guides or in lodge operation and maintenance. In fact, the sport fishery hasn't really been seen as a priority for employment by Indian people and therefore it hasn't been a major priority within the department. As such, there is no national policy in this respect and there is no national organization of native lodge owners. That is slowly changing and some of the reason must be the decline of the northern commercial fishery in which Indian people were involved. It has been collapsing and people are seeking alternatives. The department used to subsidize a lot of the commercial fisheries in the northern communities, especially in Saskatchewan, Manitoba, and northwestern Ontario. We haven't been involved in that in the last several years and more Indians are getting out of the commercial fishery. Somebody said, why, when you can get $4

or $40 or whatever a fish, why should you take $.42 a fish? Culturally, Indian people are also looking for ways to maintain their traditional life styles, stay on the land, and are resisting outside pressure to move to the cities. They would like to stay and supplement their incomes, where possible, without moving too far from the reserve.

Tourism in general, the sport fishery, hunting camps, and camp grounds that can be run by families or small bands, the Ma and Pa operation as somebody said earlier, are very attractive to Indian people. Sport fishing is compatible with this philosophy of staying on the land. Tomorrow, my colleagues will describe the program where Indians in Quebec use trapline cabins as minicamps. In the last couple of years we have seen a lot of tourists, in particular from the States, interested in a cultural exchange, coming and fishing or hunting with Indian people. As a result, the department is getting demands from Indian people to provide expertise to help them get into that business. Les Reed, a former ADM of the Canadian Forestry Service, talking about Indian opportunities within the forest sector, said that Indian people are where the trees are. Well, in a lot of cases, Indian people are where the fish are. Our map of Indian and Inuit communities in Canada shows language groups as well as the distribution of communities. As you can see there is a significant north-south split. A few bands are near urban centres, but we have quite a few northern communities that do not really have opportunities for economic development - there is just no employment up there. I also have a few slides that give you some of the demographics regarding Indian people and their distribution. The total Indian population in Canada is about 300,000. Of that, about 201,000 are of working age and there is continuous movement on and off reserves. There are also varied cultures, different languages, various states of social development and economic development and, of course, opportunities related to geography. As our charts show, Indian people are certainly less successful then the rest of the population in terms of employment.

In terms of development opportunities, they are primarily in the primary sector related to forestry, fishing, agriculture, and fur. But more and more, they are looking at the fishery services sector and fish camps for employment opportunities. There are, however, factors bearing on success that we have to look for in communities before we can really get involved with projects. We look for support within the community. Local leadership is very important. In terms of fish camps for instance, we get lots of demand, but there are also some unrealistic expectations. Often there are constraints that the communities don't really face up to or don't really realize. Some Indian people do not understand the concept of anglers, coming up and paying thousands of dollars a week to fish in the bush with a rod. It makes it difficult to operate a camp if you don't understand the concept. Because of their isolation, many Canadian Indians are not really in a position to be aware of the kinds of services that the sport fisherman are looking for, of things that have have to be at the camp, and the way the camp is run. For this reason we have tourism officers to work with the communities, making sure that they are aware of the kinds of things required for a successful camp. Language is a problem in northern communities where some of the people don't speak English very well. Similarly, there are shortcomings in business skills, financial capital, and so on, which the department tries to deal with. The focus of development, and of the self sufficiency we look for in communities, is that we want to improve skill levels,

provide employment, and generate wealth. We look for the ideas to come from the communities themselves, rather than from us. The basic motivation has to be there, it cannot be forced on them.

On checking across Canada, I was surprised at how small Indian and Inuit participation in the sport fishery is in terms of ownership. In the Atlantic, there are no Indian owned lodges that the department is involved with that I am aware of. In Quebec there are two Indian lodge associations; the Quebec Indian and the Indian Outfitters Association. They have 8 Indian and 5 Inuit camps that provide 148 jobs, a significant number of jobs in those communities. As well, there are some Inuit cooperatives that have 7 camps and 52 employees. The associations in Quebec do the promotion, booking, and arrange transportation for the various camps. As well there are many camps on trap lines which will be described on the panel Wednesday. In Ontario there are 12 operators with a capacity of about 347 persons. They have about 73 camps and 33 outposts. There is no organization in Ontario. In Manitoba there is an organized group, the Northern Native Lodge Association, that has been in existence since 1977. They have centralized promotion and booking and travel coordination. They have 7 lodges, the largest employing 30 and the smallest employing 3. In Saskatchewan we only have two small camps with 11 employees. In Alberta a couple of bands have inquired in the last year about developing proposals. In British Columbia, there are none that are funded through the department, but we are aware of 4 outfitters that have received assistance from special ARDA and were operating. There are no operations in the Yukon or the Northwest Territories being resourced by the department. You can see that the involvement is pretty minimal but Indian people do view the sport fishery as having some potential. I don't want to get into the land claims but I just want to note that in the Yukon there are 4 claims in process now where resource management by native people was a key issue and we are expecting that once those claims are settled and agreement is signed we will be seeing a few more Indian operators in there. In Saskatchewan there are a million acres that are going to be awarded to Indian people through land entitlement and 500,000 acres in Manitoba. Land entitlement is not related to new claims. The Federal and Provincial courts have agreed that Indian people are due these lands from treaties that were signed in the early turn of the century, and they never received the lands in the treaty settlements. Indian people, including the governments, are doing the land selection in those two provinces and some of the land that the Indian are looking at have some sport fishery potential.

In Quebec, the James Bay agreement has given some exclusive ownership to the Indian people that we will describe Wednesday in the panel. Here in British Columbia, there are some claims discussions taking place and with the rationalization of the commercial fishery being talked about, there may be opportunities for Indian people to make greater profits than they are making in the commercial fishery right now.

In summary, Indian people do see some opportunities for themselves in the sport fishery, as employees in non-Indian lodges as well as perhaps starting their own operations. There are barriers to be overcome before Indian people make a significant impact on the industry. In conjunction with the opportunities out there, some northern communities have concerns about the social impacts this type of development will bring to their lifestyles and cultures. In many smaller communities, there are people that are opposed to having businessmen bring in tours and fishermen. I guess all I can say is that

Indian people and the department will be pursuing the opportunities that exist for Indians in the sport fishery. And we will be looking to a lot of the people that are here for support; this includes guidance that the provincial outfitters associations can give Indian people and the cooperation of all governments involved in policy discussions for the 1990's.

Northern Ontario Tourist Outfitters Association

Canada's Sport Fisheries: Getting Ready for the 90's - The Tourism Approach

Roger Liddle
Executive Director

The Northern Ontario Tourist Outfitters Association (NOTO) has been asked to present a position paper outlining the tourism industries and commercial user groups concerns regarding the fisheries and to outline suggested approaches to fisheries management throughout the 1990's. As such, the NOTO Association has prepared the following position paper and has reviewed its contents with the various industry user groups across Canada. Namely, Quebec Outfitters Association, Manitoba Lodge Owners Association, Northern Saskatchewan Tourist Outfitters Association, British Columbia Outfitters Association, New Brunswick Outfitters Association, and Resorts Ontario.

A. Introduction

The sportfisheries are vitally important to the economic communities across Canada. Our tourism industry, the boating industry, and the sport fishing equipment manufacturing industries are just but a few of those communities dependant upon a healthy sportfish population. Sportfishing also is important as a prime recreational pursuit to most Canadians.

Canada is currently faced with a declining sportfish population throughout most of the country. The shrinking of the Canadian tax dollar and the current unstable economic conditions in many cases are having an adverse impact upon fish management, resulting in adverse effects on fish populations. It is for this reason, sound goals must be attained for effective management in the years ahead.

Reasons for developing a policy for fish management are based on a number of factors. A few of these would be; a) the need to protect the fisheries and fisheries habitat, and to effectively manage fish populations in the years to come, b) a need to protect the economic benefit of Canadians, through tax dollars, and through benefits from the tourism and sportfishing industry, c) the need to satisfy the recreational needs of the population, d) the need to satisfy the food harvest needs of the native groups within Canada, e) a need to reduce numerous resource user conflicts.

Because the tourism industry is one of the main vehicles for bringing about the economic benefit from the sport fishery, both to the government and to the people of Canada, our industry feels vitally concerned with the management of the sportfish. An overall sportfisheries management program within Canada must deal with the various aspects of the user groups, namely the tourism industry, recreational interests, native use for food needs, and the commercial fishing

industry. This position paper will represent tourism interests, which include, accommodation, facilities and services, transportation, boating, and the numerous fishing related equipments, or, what can be commonly known as a business community surrounding the sportfisheries.

It is recognized other user groups will deal within their own position papers, with those aspects of the fishery important to their industries, communities, and their uses. As such, the business community will deal within this paper on a number of policy objectives, goals, and strategies/programs. These strategies/programs will focus on the use of the sportfishery through tourism, access, harvest, fisheries management, habitat and a user pay policy. While it is recognized the various programs or strategies suggested within the paper are not complete, it will lend some guidance to the various responsible governments in formulating sound policy to manage the sportfisheries.

Definitions

Within this position paper, the term "sportfish" will mean those fish populations sought after by sportsmen when angling. Sportfish will include, but not limited to, such species as trout, salmon, bass, muskellunge, walleye, perch, and whitefish.

The term (sport) fishery(ies) will refer to those user groups (anglers and industry) in pursuit of sportfish.

Fishery (fisheries) management refers to the management of both sportfish and the sportfishery.

B. Policy Principles

In the formulation of a sound fisheries management policy the business community feels it is important to recognize a number of principles as "given". It is suggested the following principles be utilized and become part of any overall government fisheries management program within Canada's provinces.

1. The use of the sportfish should bring economic benefit to: the level of government charged with management responsibility, the business community, and the citizens of that province.

2. A user pay policy which is fair and equitable to all must be established and applied to all sportfish users.

3. Where there is a conflict between various user groups for a specific fishery the long term economic benefit derived from each of the competing user groups should be considered when resolutions and solutions are sought and implemented.

4. The sportfish populations should be managed on an individual lake basis with an ultimate goal of "maximum sustained yields".

5. The sportfish habitat must be managed on a site specific basis with an ultimate goal of "no net loss".

6. Overharvesting of legal limits must be opposed at all times, and conscientiously and rigorously prosecuted.

7. Legal limits of specific fish populations which could lead to an overharvesting situation and the surpassing of the "maximum sustained yield" situation should be opposed.

8. The right of native persons, in remote areas and in certain situations, to harvest sport fish for individual consumption is recognized, provided the harvest recognizes the policy of maximum sustained yield.

9. Management of the sportfish must be a shared responsibility among all levels of government, all the sportfish users, and all of those that gain economic benefit from the sportfisheries.

10. Where possible and practical, access to and the use of the sportfish should be encouraged through the various sectors of the tourism industry and business community.

11. Organized public consultation should be sought and encouraged on major and/or controversial sports fisheries management decisions.

12. The economic rights of existing user groups should be respected when changes to resource management policy are considered.

13. All fisheries management prescriptions should be designed to manage the resource, while at the same time attempting to reduce the amount of limitations and regulations applied to the users. (i.e. don't limit the ability or opportunity to fish).

C. Policy Objectives

The business community has identified four policy objectives that should be recognized in formulating an overall fisheries management policy.

1) Fisheries Protection/Rejuvenation

The primary objective of any sportfish management program should deal with the protection and rejuvenation of that fish population. Management prescriptions should set out to revitalize ailing fish populations, to achieve a no net loss situation for habitat, and to bring fisheries populations into line with a harvesting level of "maximum sustained yield". Achieving the maximum sustained yield and the revitalization of the ailing fisheries populations can be achieved through a number of management programs such as: access control, facilities control, harvest control, educational programs, user involvement programs, habitat improvement, fish stocking and, species introduction. The achievement of the no net loss of habitat can be achieved through habitat conservation, habitat restoration, and habitat development, as outlined in the Discussion Paper of the Department of Fisheries and Oceans, "Toward a Fish Habitat Management Policy." In addition to the proposed fish habitat management policy, policies must be set to effectively control water levels so as not to be a detriment to sportfish populations.

2) Industry Protection

Having a healthy fisheries population will be of no benefit to Canada, or its citizens, unless there is an ability to utilize that resource. The business community should be the prime accessing factor to the resource. As such, the various industries involved in this business community must be protected in

order to continually provide the economic benefit to the country. The governments must also recognize the economic and social benefits derived from that tourism industry. In order to do this it must recognize the various aspects of the tourism industry dependant on the fisheries, i.e., in order to have a healthy tourism industry, not only do we need a healthy fish population, but there must be a healthy environment for that industry to operate in. Such a recognition would take into consideration the requirement for wilderness and the remoteness of most tourism operations utilizing the fisheries, the degree and type of access to those facilities, and the business environment in which that tourism industry must work.

This industry protection should also consider the present and the future use. The industry must be allowed to expand and to utilize the resource, dependent upon the sportfish capabilities, while attaining maximum economic benefit.

In many sections of the country the sportfish populations have dropped to unacceptable levels, putting in jeopardy the business communities dependent upon them. In order to offer the necessary industry protection in those areas the ailing sportfish populations must be restored to acceptable levels, and management prescriptions must be set in place to allow acceptable harvest limits with management programs based on maximum sustained yield.

3) Economic Benefit

The economic benefit of the sports fisheries to the various Canadian economies should not be under estimated. There is economic benefit through taxation, user fees, employment, balance of payments, purchase of goods and supplies, and construction of tourism and business facilities. It is also important to recognize the vital economic benefit given to rural and remote areas, in the employment of women, youth, and native groups. These areas would otherwise be deprived of any form of industry.

Thus a primary objective should be, to maximize the regional and national economic benefits derived from the sports fisheries.

4) Social Benefit

Numerous social benefits are derived throughout the country from the sportfish, and the related user industries. Any fisheries management policy and program should recognize the need to: a) provide for the local economic social benefits, through employment, b) provide for recreational pursuits to the local residents and non residents, c) in the north and rural areas to increase the facilities and services to those local inhabitants while satisfying the needs to tourists.

D. Policy Goals

The business community has identified four management goals which it suggests should be pursued in any fisheries management program.

1) In order to provide acceptable recreational pursuit by the residents of an area, and to recognize the need to compete with other sports fisheries areas within the world, it is necessary to restore all ailing sports fish populations to acceptable levels for the purpose of sportfishing.

2) Fisheries management programs must be designed to maintain current healthy fish populations at optimum levels.

3) Where feasible, and in order to satisfy the needs of sportfishermen, introduction of exotic or other sportfish populations to a water body could be considered.

4) Once a healthy fish population is achieved the harvest or the utilization should be based on the maximum sustained yield policy.

E. Strategies/Programs

Any fisheries management strategy is only as sound as the various individual programs within that strategy. The business community has outlined a number of strategies and programs it feels should be considered in the formulating of a sound fisheries management policy. The first four strategies outlined in this section deal with what might be termed as motherhood issues which require very little explanation. The additional strategies deal with issues related to the tourism industry.

1) Cooperative Resource Planning

Fish management priorities should be incorporated into all air, land, water, and other resource use plans. Competition for the use of, and access to, the various resources within our country have led to serious conflicts over the past few decades. Prime examples of this are the conflicts arising with air pollution and acid rain, the conflict of flushing pollutants into water bodies, as well as the conflicts arising through access to various resources. One need only look at the existing conflicts arising from the forest products industry's extraction policies in relation to the need to protect fish habitat to recognize that conflicts are existing and are often to the detriment of a viable tourist industry. Cooperative resource planning, such as seen in Ontario through the District Land Use Guidelines, can certainly lead to a lessening of the conflict.

2) Public Consultation

The public as well as the various user groups should be consulted on all major or controversial management prescriptions, and on the development of new policies and legislation for fisheries management.

3) Public Information and Community Involvement

It is necessary to promote public awareness and to encourage full community and user group involvement in managing the various sportfish populations. An example of a very successful community involvement program lies in the "Community Fisheries Involvement Program" within Ontario, whereby thousands of man hours of volunteer work has contributed to the fisheries improvement program.

4) Scientific Research

Scientific research must continue in order to upgrade the skills necessary to manage our complex fish populations. In addition, a continuation of the inventorying programs must be pursued with full vigour to fully determine the health of our fish populations.

5) Use of the Sportfish Through Tourism

In recognition that most economic benefits from the sport fisheries is derived through the tourism industry, every effort should be made to protect the tourism industry and encourage the pursuit of the sportfish through that industry. As such, all fisheries management strategies should take into consideration two vital aspects: Firstly, those sportfish populations presently used and those unused, and secondly, those water bodies readily accessible, and those not readily accessible. From these aspects, a variety of management policies can be derived to best manage the sportfish resource while at the same time bringing maximum economic benefit to the tourism industry and the various provinces. This philosophy was recently expounded by the Northern Ontario Tourist Outfitters Association in their report to the Ontario Royal Commission on the Northern Environment, February 15, 1983. While the following passage is directed at tourism development in Ontario, the philosophy is applicable to other provinces within Canada.

> "The present resource base located in that part of Ontario lying north of the 50th base line is of tremendous potential to the economic growth of Northern Ontario. Parts of this broad resource base are essential to the growth of the tourism industry. In order to properly manage the ongoing economic tourism structure, it will be increasingly important to have an inexhaustible supply of certain key elements of the resources that are vital to attracting our client groups.
>
> As was documented in "The Fishing and Hunting Lodge Industry" study, of prime importance to both Americans and Canadians visiting the present lodge industry is fishing, hunting, and the wilderness experience. Not to recognize the importance of these elements in the yet undeveloped areas of our north would be inexcusable. Not to manage these same resources on a plan that would allow for a continuance of their importance and acceptance by visiting tourists would be equally as inexcusable. It is possible to have these resources managed in a fashion that would allow them to be utilized on a sustained-yield basis, and at the same time preserved for use by the residents of Ontario through the tourism industry for years to come.
>
> In the past throughout Ontario the resource management has not been carried out with this same intent. As a result, we are becoming increasingly aware that many of our once abundant resources are in great shortage of supply. One need only look at the present extreme management techniques used to correct this situation, in areas such as moose management, reforestation, reduction of fishing limits and seasons, and the reduction in remote air-only-accessible fishing/hunting locations. The reduction of these varied resources is a definite detriment to the economic benefit tourism can provide to our north.
>
> It is imperative to set a policy for resource management in our far north that would first and foremost bring maximum economic benefit to the peoples of Ontario on a continuing basis. This policy must recognize that the tourism industry can function effectively and most beneficially to Ontario on the

basis of a maximum sustained resource management philosophy. While it is fully recognized that for the maximum economic benefit many varied resource users would be present in the north, the resources of the fish, big game, waterfowl, the wilderness setting on and near waterbodies, and all naturally-occurring physical wonders in the landscape can be best and most effectively utilized by the tourism industry."

a) Sportfish populations in waterbodies presently unused and not readily accessible - Of great potential to the tourism industry are those sportfish populations in waterbodies presently unused for tourism purposes and not readily accessible. Generally, areas containing such sportfish populations would be found in both the mid and far northern parts of most provinces within Canada, and can be accessed by float aircraft only.

A suggested management strategy for the sportfisheries in such an area of Ontario which has been adopted by the Northern Ontario Tourist Outfitters Association, deals with management based on economic benefit and the sustained yield basis. The following management outline was presented by the NOTO Assoc. to the Ontario Royal Commission on the Northern Environment in the position paper "Tourism Development North of 50", February 15, 1983.

i) Fisheries

The fisheries resource north of 50 is of great importance to many user groups. Sport angling, harvest-food fishing, and commercial fishing are the three main uses that must be considered when establishing management and development guidelines. If properly documented and managed, all three uses can be continued at varying degrees.

Prior to setting down any guidelines, full and accurate inventorying must be begun. This inventorying would, when complete, enable the proper administrators to best allocate the various fisheries to each of the user groups. Once the allocations have been made, based on the economic benefit and the sustained-yield basis, proper and complete documentation can be carried out of the eventual harvests. The maximum Sustained Yield (MSY) can be readily calculated using the Ryder Index and research conducted by the fisheries personnel of the Ministry of Natural Resources.

Once the waterbody inventory is established, uses can be determined for each fisheries. As an example, one might suspect that perhaps waterbodies bordering Indian reserves, small lakes with a predominant whitefish populations, and certain large waterbodies not suitable for tourism development, would be designated for harvest-food fisheries and commercial fisheries. Certain large lakes and/or rivers suitable for both large resort development or outpost camp development would be set aside for tourism development. In all cases, resource extraction would be on a sustained-yield basis.

ii) Fisheries Extraction

Once a fisheries is established as a Tourism Use Resource, and MSY has been calculated, an attempt should be made to equate the MSY harvest to potential tourist industry uses. A number of possible means of tourist industry uses can be projected:

1. A trophy-quality sport fishing harvest use can be established whereby anglers fishing that body of water can only extract one trophy fish. All other fish must be returned to the water unharmed, and all fish for consumption must be imported. Such arrangements with commercial fisherman in the north would assist in a better understanding of the biological implications by the users and also assist in sponsoring more co-operation between the tourist industry and the commercial fishermen;

2. A reduced-take sport fishing harvest could be established for a number of lakes allowing for any combination of reduced harvest by such means as lower limits, levels of local consumption, and size limits;

3. A traditional sport fishing harvest could be maintained that would allow for sport fishermen to harvest the full provincial limit as well as consume normal quantities while fishing on the waterbody through the tourist industry.

Each of the above three categories (Trophy, Reduced, and Traditional) would be equated into the number of maximum potential guest beds for each fisheries. As an example, with Lake X having a determined MSY, it could be decided Lake X will support a destination American Plan resort with a guest capacity of 75 using the Trophy-Quality Sport Fishing Rules, and that Lake Y, having a determined MSY, will support a destination housekeeping resort for 20, with each guest being able to harvest for local consumption six fish, under the Reduced-Take Sport Fishing Rules. Another Lake 2 might support an American Plan outpost camp for four under the Normal Sport Fishing Harvest Rules.

It would be necessary, and the responsibility of the tourist operator, to document the amount of harvest of each species from any waterbody. Likewise, any harvest by commercial fishing and harvest-food fishing must be documented. In addition, and in order to continually determine that the maximum economic benefit is being realized by the province, a means of establishing and documenting that benefit must be carried out.

There will presumably be a number of lakes that would be of potential use for two of, or all three of, the categories of sport fishing through tourism operations, commercial fishing, and harvest-food fishing. Provided that quotas were maintained based on the MSY, that species sought after did not conflict with the other uses, and the use did not exist to the detriment of the economic benefit of the province, those uses could co-exist and be of benefit to each other.

iii) Fisheries Management Techniques

With the existence of harvest and/or use based on the MSY, and an ongoing evaluation of that data, management would be reduced to fisheries maintenance techniques. In the case of lakes that would benefit from the stocking of lake trout, consideration should be given to that management tool.

This management strategy is one that could easily be modified or expanded upon for other similar areas within Canada. Although it is recognized such a policy could initially increase fisheries management

expenditures in the applicable areas, and possibly slow tourism development until inventorying was partially complete, the long term developments and benefits would by far exceed those that would be attained by utilizing today's strategies.

By following such a management strategy, it is important to recognize the necessity of following a commitment to the previously mentioned strategies of cooperative resource planning and scientific research. If Canada, or our provinces individually are to continue to compete on the world market as a prime sportfisheries destination, then policies must be set that not only preserve those sportfish populations, but encourage and enhance the industry primarily responsible for accessing those sportfish.

b) **Sportfish populations in waterbodies presently accessible and unused** - Overall fisheries management strategies in this class of waterbodies could be similar to those outlined in section E 5.a. However, it should be recognized that in this area there is a stronger possibility the fish populations would require rehabilitation prior to being exploited. If such is the case, then we would suggest that an individual strategy for those waterbodies would effectively manage any fisheries harvest until such a time as the rehabilitated fish populations are stable. Such management prescriptions could take the form of the previously mentioned "Reduced Take" harvests.

Any strategies for use of the sportfish in this class of waterbodies should take into consideration the economic benefits as well as the local social needs. In many cases the local social needs would be aptly met by access through the business community.

c) **Sportfisheries populations in waterbodies presently being utilized and not readily accessible** - For the most part such waterbodies would be those utilized by the tourism industry for the location of fishing resorts and lodges, outpost camps, and day trip lakes normally accessed by float plane, extended boat/canoe trips, and/or lengthy portages. The sportfish populations in these waterbodies are utilized to the greatest extent by clients of the business community. As such, the greatest economic benefit would be derived from this type of use and access on a per fish or per man hour of fishing opportunity basis.

In order to continue to realize the economic benefit from these fish populations, strategies should be developed to ensure firstly the protection of the existing industry users, and secondly the encouragement of further development along lines giving the maximum economic benefit to the province and country, while balancing society's needs.

To provide for the industry protection element, resource managers should recognize the primary necessity is to ensure a continuing fish resource at optimum levels. In many cases, management strategies must be developed to effectively and efficiently improve the sportfish populations on individual waterbodies to a point which will allow, at a minimum, a fishing opportunity to meet the needs of today's anglers in our competitive markets.

It is important to recognize that one of the main criteria for the success of any remote tourist operation is the belief by the clientele that with the remoteness comes the "prime fishing opportunity". For the economic benefit of

these citizens serving that sector of the business community management strategies must be developed to present and enhance the fisheries and perpetuate this belief.

In many cases these sportfish populations could be managed and harvested based on a maximum sustained yield policy. However, even though a goal of maximum economic benefit could be accomplished through policies similar to those suggested for development on remote unutilized lakes, caution should be taken in implementing any change in operating structure of existing tourism developments. The rights of existing users (outfitters, etc.) must be recognized and form part of any fisheries management strategy. That is not to say that where any sportfish population could withstand further sportfishing pressure, new developments could not be encouraged under the proposed three category extraction methods (Trophy, Reduced, and Traditional).

In many parts of Canada, what were once remote and unaccessible areas are becoming accessible through the proliferation of resource access roads. Part of the protection policy provided the existing tourism operation must recognize the need to ensure the necessity of "inaccessibility" of most of these operations. In many cases the "accessible only by air" aspect is just as vitally important as sound sportfish populations. Sportfisheries managers should recognize this remoteness need along with the fact the degree of accessibility is one of their prime management tools. As mentioned in strategy section E. 1, there is a need to have cooperative resource planning. No doubt though these same sport-fisheries managers will hear from residents saying they must be afforded the right to access remote tourism lakes via resource access roads. While it might be argued these residents should be allowed access to these newly and/or nearly accessed waterbodies, it should be pointed out that if acceptable standards of fishing opportunity were available on other historically accessible lakes, then these same residents would find little need to access and disrupt the viability of the business opportunity of the tourism industry. In short, in order to assist in protecting the tourism industry dependant upon remoteness, proper fisheries management policies must be addressed as well for those waterbodies presently accessible and utilized.

d) Sportfish populations in waterbodies both accessible and presently utilized - As with the previously mentioned classes of waterbodies, there may be a need to revitalize the sportfish populations and afford it proper protection. So too must consideration be given to the protection of the business community dependent upon those sportfisheries. In most cases that protection of the business community can be accomplished by assuring a sound sportfish population followed by management policies which will allow those businesses to carry on their affairs. Again, as in keeping with the suggested policy principles outlined in Section B, it is recommended that in these areas sportfish populations be managed on an individual basis with an ultimate goal of maximum sustained yield.

The necessity to restore ailing sportfish populations in waterbodies of this section cannot be emphasized enough. The economic benefits resulting from healthy sportfisheries has far reaching implications for communities throughout the province. One need only consider the positive effects of employment and taxation through the tourism sector to realize that we as a country cannot afford to let our sportfish populations further deteriorate. The positive effects of recreational pursuits by Canadian residents and food

requirements by our native populations must also be considered. The effect of a healthy sportfisheries in accessible waterbodies close to population centres, as was pointed out in section E 5.c, will assist in alleviating conflicts currently arising in regard to resource access and remote tourism operations.

But for the business community to suggest a comprehensive program aimed at restoring all sportfish populations in these areas to acceptable levels in the next two decades would be difficult. We realize budgets within federal and provincial resource management departments are limited. At the same time we recognize there isn't a demand to have the high quality sportfishing in all waterbodies, for example, in waterbodies used for other forms of water based recreation. Management strategies should be set based on the maximum economic benefit to the province and Canada. This will undoubtedly necessitate a complete inventorying of the waterbodies and the fishes found therein, and an analysis of sportfishing opportunity demands. A balance must be met in these areas recognizing the needs of the business community, local sportfishermen, tax revenues and budgeting limitations. However, it is important to recognize both the maximum economic benefit and a proper balance can be achieved by protecting the business community and encouraging the use of the sportfish through the tourism industry.

6. Access

The right of Canadian citizens to access our waterbodies and utilize our sportfish resource must be recognized. However, the means of access should be recognized too as a prime fisheries management tool for both residents and non-residents, and as an avenue for bringing maximum economic benefit to the provinces and business community.

Accessing the sportfish resource should be considered in two ways: firstly, whether the use should be had while under the auspices of the business community, or on the individual's own, and secondly, the actual physical access to the waterbody, i.e. by air, by road, by water, or by foot.

In regard to the first means of access, the benefits derived by access through the tourism industry should be fully recognized. From the sport-fisheries management view, there can be definite advantages on harvest control, as was pointed out in Section E 5.a, under the three proposed harvest methods. User attitudes, fishing methods, enforcement, and overall respect for the resource can be easily evaluated and controlled when sportfishermen utilize tourism facilities. Another positive affect is control of the amount of use by types of user, which can not only effect harvest, but effect existing and potential user group conflicts. Examples of this type of access control can be seen in some provinces. In Manitoba, lake management plans can designate lakes as "tourism lakes" which encourages tourism development and use of the resource through the industry. As well, the pilot Crown Land Camping Program in Ontario will control camping and access to the sportfish resource of non-Canadians, thus relieving existing conflicts between local users and non-residents, encouraging use of tourism facilities, controlling fish harvests, and assisting in enforcement concerns.

Access to the sportfish through the business community also obviously has very positive effects on the economic benefits to the local residents. Employment, additional recreational facilities, taxation at all levels of government, and economic assistance through balance of payments are just a few of the more obvious economic benefits to be had.

The second form of access, i.e. the means of access to the resource, must be recognized as an area of major concern to the business community. The implications of the change of a means of access must be fully evaluated as to the affect on the existing business community, and on fisheries management, harvest, and enforcement.

Often there are advantages to the business community when means of access to those effected businesses are altered or improved. It is well known that the westward thrust of the railway and later on our highway systems brought development and prosperity. However, there are times when a change of access can be devastating. In regard to a business dependant upon remoteness, and a sportfish population with a delicate balance between healthy and over harvested, a road access could be fatal.

Our tourism industry in the remote areas of our country is often dependant upon that very remoteness for its survival. Conversely, our resorts and hotels are dependant upon easy access by road. Our wilderness camping areas can often do without either air or road access. We must have a balance .....a balance that not only considers the needs of the business community, but also considers the needs of the sportfish resource. Again, as was mentioned in sections E 1 through E 3, there needs to be cooperative resource planning, public consultation, and community involvement in our strategies.

7. Harvest

The attitude of the general public in regard to sportfishing and harvesting of sportfish has changed during the past decade. At one time an attitude prevailed that full limits must be kept in order to have a successful outing. Today that attitude has changed. Fortunately, for both the sportfisheries managers and the sportfish populations, the public is aware of the need to conserve. Now, the opportunity to fish and the opportunity to catch a fish are as important as full limits once were.

In recognition of this present attitude, and the goals and objectives outlined earlier, fisheries management programs should be set to allow, firstly, the opportunity to fish, and secondly, the opportunity to harvest sportfish based on a policy of maximum sustained yield. This harvest policy would need to be tempered to fit both the need of the fish resource in a particular waterbody, and the needs of the existing business community dependant upon the sportfisheries there.

There exists in our country a diverse set of sportfish user groups. They all have their place within our community. The commercial fishing industry in some localities, along with the sportfisheries, harvest species of fish we refer to as sportfish. In an ideal situation, there would be ample supplies of these sportfish to satisfy the demand of all users. Unfortunately, such is not the case in most waterbodies in Canada. Because of the greater economic and social benefit to our country and communities offered by sportfish harvesting through angling as compared to commercial fish harvesting methods, commercial fishing for sportfish should only take place in those waterbodies where there is no conflict with sportfishing. Where there is a conflict, sportfishing should take preference, except where it can be shown that commercial fishing will offer greater economic benefit.

In those cases where commercial fishing for sportfish is allowed, quotas should be set in recognition of sportfisheries management policies set on the Maximum Sustained Yield philosophy.

Under some existing treaties with native Canadians, recognition has been given allowing harvesting of sportfish for individual consumption. This native harvest is essential in many parts of Canada for their survival and social welfare and should not be compromised. It must be recognized though, in some areas, other user groups (of the business community) have become dependant upon those same sportfish populations. They too must have their rights protected. For the economic and social benefit of all, native sportfish harvests for individual consumption should not exceed the maximum sustained yield of that sportfish population.

8. User Pay Policy

The sportfish resource in Canada is recognized as being available for use by the citizens of, and visitors to, Canada. Because this resource has a value both to the peoples of Canada, and to the various user groups, and because monies must be spent to manage the resource, the tourism industry feels a fair and equitable user pay policy for both use and extraction of sportfish must be implemented. This policy should be based on the overall long term economic benefits to the province, country and user group.

In consideration of the fair user pay policy, the managing authorities should recognize the need to return a fair portion of the derived revenues back into fisheries management programs. In all situations, the user pay policy must be just that, and not a substitute for effective fisheries management programs, or a deterrent to utilize the fish resource. A fisheries resource demand should not be influenced by user fees, but instead be influenced by fish supplies.

Discussion

Ralph Shaw: Did I understand you to say that if there is a remote lake somewhere and there is an operator on it, that he has the exclusive use of that lake? On this side of the mountains you'd have a bit of a problem.

Roger Liddle: No, I think you may be referring to what I've suggested for category one, water bodies that are presently unaccessible and unused which may be designated tourism use based on the populations within the lakes. But I'm not saying that use of that water body by residents of Ontario or residents of Canada be restricted.

Art Smith: If you are not going to restrict the use of those lakes, how do you propose to maintain a standard of quality as some day you are going to have to bite the bullet, because you can't have it both ways. You can't have it wide open to the public, and still maintain the kind of standard that people will pay money for.

Roger Liddle: I guess that will be up to resource managers to try to improve the fisheries on those lakes. I'm not here to suggest how they do it. I'm not a biologist. I'm a business man, and I recognize that the need to manage the resource falls with the various natural resources departments.

Dick Roberts: I assume that for your category one, tourism, there would only be the one operator allowed for each body of water.

Roger Liddle: It doesn't necessarily have to be just one operator, but they would be licenced like such tourism operations are licenced in Ontario, in Manitoba, and probably across Canada.

Don Toews: Basically we have attempted to gear development to the size of the resource, and the level of development depends on the angling quality we are after. Basically we try to restrict one operator to a lake, except on some very large lakes. But where one lodge is capable of utilizing that resource, we have found it beneficial to restrict it one operator, so it is in his interest to practice resource management as far as the lodge operation itself is concerned.

Rex Porter: I'm pleased to hear the principles which you put forth which fall in line with the Canadian Wildlife Federation statement that you start with your resource and then look at what can be harvested. I also like the approach that water bodies and fish stocks can be divided up into different types of use, depending upon the types of experiences which we would like to have in the sportsfishery. These principles could have wide application throughout eastern Canada also.

Bob Wowchuk: When resource operators are licenced to essentially control fishing effort on a lake, is there some sort of tenure established to that licence?

Roger Liddle: In Ontario, your licence to operate is not restricted to time, although in northern Ontario, the Ministry of Natural Resources does give out land tenure licences and they have leases that generally run for 21 years with 10 year renewable options.

Art Holder: I think there is a cop-out in the statement that resource managers should deal with the problems of control by providing more management. I think that is a continuation of the sort of long term cop-out which sacrifices the resource on behalf of trade-offs to the users. I think we have to work much more closely together to try to reach some kind of consensus on how effort in numbers of anglers in an area will be controlled. We are starting to think about that in Ontario and really there is no consensus among the public about how that should be done, and I think we have to search for that kind of consensus, both from a point of view of supporting the tourist industry and also the general angler. I think it is one of the critical issues in the future.

Roger Liddle: I certainly agree with that Art, 100%.

The Sport Fishing Institute of British Columbia

Sport Fishery for the Future: Into the 1990's

T.C. Davis

Introduction

In a 1976 presentation to the Annual General Meeting of the Fisheries Council of Canada, Dr. G.H. Geen, then Director General, Fisheries Management for the Pacific Region of the Department of the Environment, outlined a new role

for the Fisheries Service. "We are no longer simply in the business of just dividing the resource among various user groups, usually on an historical basis," he said. "On both coasts of Canada we are developing policies we hope will optimize the yield to all Canadians from the fisheries resource and ensure a viable industry." Dr. Geen then went on to say that "this yield to all Canadians would not be measured only in economic terms," because, "although the benefits derived by native Indians participating in their food fishery and the sportsmen are not easily expressed in economic terms, their significance is considerable."[1]

The Sport Fishing Institute of British Columbia was formed in 1980 to protect the public's right of access to the fishery, and to act as a spokes group on related sport fish issues. It is entirely self funded with the major portion coming from those businesses directly involved in the sport fishing industry -- marinas, guide's organizations, tackle manufacturers, wholesalers and retailers. Financial support also comes from angler and angler organizations. Our message and direction are representative of both the industry sector and the recreational user because neither can survive without the common goals or support of the other. Our thrust has been directed at maintaining access to the saltwater salmon resource in a time of conflict and crisis in the entire Pacific salmon fishery. Our aim has been to highlight the tremendous recreational and economic potentials, as yet virtually untapped, within the sport fishery. Through all of this the Institute is constantly aware that the wisest use of the salmon resource is of paramount concern.

Dr. Geen's statement embodied the essence of the Institute's presentation to Dr. Peter Pearse's Royal Commission on the Pacific Fisheries, providing the Institute's opening remarks in that forum. His observations are timely and thus appropriate for our submission to the Canadian Sport Fisheries Conference, but for somewhat different reasons. Since 1975, and much more dramatically since Pearse's work, changes have taken place regarding the West Coast Sport Fishery. So Geen's words provide us with an excellent start up point for launching into our paper on salmon sport fish resource use, it's present status, future goals and opportunities heading into the 1990's.

1976 - 1984: The Calm Before the Storm

Prior to 1976 little was known about the salmon sport fishery in British Columbia other than it was apparently utilized to some degree by resident anglers, and that it provided obvious tourist values because people were prepared to pay a price for the opportunity to catch salmon. Terms like industry, or even business, were not used to describe the recreational activities. Rather words like part time, summer employment, seasonal activity were more commonly used as descriptives. Nothing was known about it's economic impact, employment figures or levels of participation. Equally disturbing, little data had been collected on it's impact on the salmon resource, or how that impact fitted into the overall management scheme. What was known and most generally accepted was that recreational fishing offered rewarding social benefits for the participants. These benefits were hard attributes that could be expressed in dollar and cent terms. It was equally apparent that an enormous commercial fishing machine overshadowed the activities of the sport fishery. Secondly, most departmental energy was distributed towards the management of the salmon stocks for commercial harvest.

Preliminary studies on sport fishing effort and economic value were really nothing more than estimates as the following 1975 data collected from various sources indicates. In 1975 there were estimated to be 364,000 resident and non resident saltwater anglers. Accurate data was simply not available as resident licenses were not issued at that time. Salt and fresh water anglers were thought to expend $225 million on equipment in whole or in part for sport sport fishing. This also included property. However no breakdown on tidal and non tidal expenditures was given. Total expenditures on food and lodging, transport and fishing (services and tackle) was thought to be $33.5 million annually. Data had not been taken on the prime target species, although it was assumed that salmon were the main attraction. Sport catch figures could be described as sketchy at best, reflecting a perception of increased catch, but hardly based on any solid evidence. One such graph on sport chinook catch showed sport's catches in 1970 of 150,000 pieces increasing each year by 75,000 pieces up to a 1978 figure of 750,000.[2] An interesting story will perhaps illustrate the lack of data, or more appropriately, the lack of concern on the part of fish managers towards the sport fishery...For years fishermen off Victoria had been concerned about the effect of the Juan de Fuca net fleet on stocks of coho and chinook salmon (not the targetted species). They complained that after net openings no fish were caught behind the netters. One fisheries manager rationalized this by stating that coho became non-biters past the area where the netting took place...In short, no one paid much attention to the sport fishery during the 1960's and the 1970's until 1981. This is when the department pushed the panic button on the issue of chinook conservation.

There was a pivotal point in 1981 for the sport salmon fishery. Suddenly, because of signals warning of impeding problems for chinook salmon stocks (one of the two salmonid species upon which the sport fishery relies upon for its existence), masses of hastily prepared data on the effort, impact, catch and numbers involved in the sport fishery began to appear to support a number of severe sport fishing regulations. Projections were made indicating that the number of tidal anglers had increased to 425,000[3], and would increase to 857,000[4] by the year 2008. Estimates of catch varied from 1.3 million salmon to 2.0 million salmon, with chinook as high as 750,000 in the Gulf of Georgia making up as much as 30% of the entire coastwide catch of chinooks. Accompanying all of this new data senior department officials issued press releases to the effect that most of the blame for the chinook decline could be laid at the door of the sport fishery.

> "the sport fishing cannot continue almost unregulated while restrictions are imposed on those who depend on the fishery resource for their livelihoods"

> "downriggers increase the sport fishing effectiveness to the point where sports anglers can rival the commercial[5] fisherman's ability to catch salmon"

It appeared to those involved in the sport fishery that the regulations were designed not so much to manage the sport fishery but rather to beat it into the ground. Had the proposed regulations gone into effect many sport fish related businesses would have closed shop as the opportunity to sport fish in a number of geographic regions would have severely reduced. The regulations were imposed for the most part as a knee jerk reaction to a conservation need based on little statistical data. Furthermore the regulations reflected departmental

policy of the day, which indicated to all concerned that the sport fishery was a nuisance operation in conflict with both commercial harvesting demands and departmental management policy. 1981 clearly indicated that no one in management realized the enormous potential in the sport fishery, or if they did, they were not talking about it.

In 1981 the crisis in the sport fishery highlighted the crises in the salmon fishery as a whole. In the spring the Sport Fishing Advisory Board, working in consort with the Department of Fisheries and Oceans, hammered out a chinook conservation plan that satisfied the managers in terms of conservation and still permitted the sport fishery to function at recreationally satisfying and economically acceptable levels.

Dr. Pearse's Royal Commission on the Pacific Coast Fisheries provided the first real substantive data on the sport fishery establishing believable figures for catch, numbers involved and economic impact. Based on Commission findings and from submissions made to the hearings Pearse established that 296,351 resident and non resident anglers spent $80 million on goods and services directly related to salt water angling pursuits. Compared to the 1975 studies these figures show that almost 68,000 less participants spent almost 2 1/3 times as much money on recreational fishing experiences. Even taking into account inflationary trends this represents quite a discrepancy. Catch figures were even more startling. Pearse determined that sport fishermen were very inefficient harvesters of the resource in terms of catch per effort. Pre-Pearse estimates put the sport catch at 1.3 million to 2.0 million salmon. The commission's findings showed a total sport catch coastwide of less than 1 million fish of which two thirds were coho, most of the rest chinook and 2% were pink salmon. Chum and sockeye were negligible. Chinook catch figures were between 360-390 thousands. The sport fish impact amounted to 4% of the total salmon catch.

1981 ushered in an era of information blitz for the sport fishery. During this period, more was written about the sport fishery and more data was collected on it, probably than at any other time in it's history. An important milestone in the development of the sport fishery had been reached. Raw data on the sport fishery was beginning to surface. In real terms the sport fishery was starting to make sense - it at least had definition. The data collection did not cease with the issuance of Pearse's final report; "Turning the Tide: A New Policy for Canada's Pacific Fisheries." A process of collection, revision and fine tuning sport data has evolved which now provides the most up to date information available. This process has been welcomed and recognized as long overdue.

Unfortunately other necessary components for the proper evolution of the sport fishery developed less rapidly or did not develop at all. The awareness of policy makers and managers, even in light of the new information, that the sport fishery is a valuable utilizer of the resource has been impeded by traditional concepts of how the resource should be harvested and managed. The commercial fisherman's perception of the sport fishery changed little, if at all. It is still viewed as a nuisance fishery, existing only so long as it does not interfere with their assumed historical right to harvest the resource simply because it is there and at whatever cost. Our present Minister of Fisheries, the Honourable Pierre De Bané has taken the first step towards recognition that the sport fishery is valuable and a wise economic user of the salmon resource.

> "he (the Minister) is prepared to try his very best to achieve a new priority for the Pacific sport fishery, moving it higher on the scale in terms of relative importance and significance, and at least on par with the commercial sector.[6]

How this higher priority will manifest itself in relation to the whole picture of resource use conflicts, an economically depressed commercial salmon fishery, depleted stocks and native fisheries issues remains to be seen. The imminent problem for the sport fishery might be simply survival. Getting to the 1990's will provide as great a challenge as designing a sport fishery for the 1990's.

1984

To fully understand the recreational sport fishery it needs to be compared to some other resource user of similar nature. Since salmon fishing is common to both the commercial and recreational user economic value and resource use comparisons can be made now that a sound data base is in place. If the sport fishery is to have any chance of realizing it's potential on the west coast its values must be recognized by resource managers, competitive users, the entire business community, federal and provincial agencies (tourism, small business, economic development etc.), and most importantly by all British Columbians and Canadians, who as owners, stand to benefit from its wise use. The salmon resource spans many areas of economic and recreational endeavour. Decisions about it's use have the potential to effect the lives of a great many Canadians. It is the over-riding concern of the Sport Fishing Institute that fisheries managers husband the resource so that the greatest benefits accrue to the owners--the people of Canada. Economic values based on units of the resource used and the subsequent returns are important measurable guidelines in determining how wisely the salmon are used. They are not the only yardsticks. As mentioned earlier social values are important, however for the purpose of the following comparisons social values are less quantifiable and as such are open to wide interpretation. By comparing commercial and recreational values derived from the salmon resource it is not the Institute's intention to suggest that commercial pursuits should be replaced by recreational ones. On the contrary, Canada needs a strong commercial salmon industry that is able to compete favourably on the world market. It also needs a commercial fishery that is prepared to recognize the legitimacy of the sport fishery and the values that are a part of it. What Canada does not need are policies that fail to address problems within our commercial harvesting system, and policies that fail to recognize the potential of the recreational sector.

The following table summarizes the expenditures made by anglers in British Columbia in 1980 and 1982 by category of expenditure. The 1980 figures were compiled by Marvin Shaffer and Associates Ltd., and the 1982 figures were compiled by DFO.[7]

Expenditure Category (,000's $)	1982	1980
Lodging, campsite fees	7,883	5,306
Packages, guide services	5,510	3,402
Food	18,077	13,191
Travel costs	15,736	11,631
Boat rentals	2,294	1,584
Fishing supplies, bait	16,882	13,451
Household owned boat costs	50,759	40,396
Fish processing	1,219	943
	118,360	89,904[8]

* 1982 figures show a 31% increase over 1980 figures.

The above do not include the capital expenditures on boats, other major equipment or property purchases related in whole or in part to sport fishing.

In terms of capital investment various studies have tried to establish a value for recreational fishing. The most recent figures from DFO suggest that the sport's fleet has a value approaching $1 billion. Previous papers, such as Mary C. Harrison's 1979 study on recreational boating in Georgia Strait, reported a value of $650,000,000 on primary boats which does not include 34,200 secondary boats. A 1980 study by Thorne, Kellogg and Stevenson indicated that 67% of the activity of all pleasure boaters is fishing. These figures are far in excess of the salt and fresh water 1975 combined figure of $255 million, which also included property. Whichever recent figure is taken the value of the recreational fleet is at least equal to or exceeds the capital value of the commercial fleet. (Valued at approximately $500 million).

As shown in the above chart the direct impact of recreational spending in 1982 was $118 million. Direct annual impact from the commercial sector can be expressed in terms of landed and wholesale values of salmon products. 1981 serves as an excellent example because it expressed commercial values in a year of relative prosperity. In 1981 landings of salmon were 21% higher than the previous 10 year average and market prices were not yet depressed as in subsequent years. In that year the landed value of all salmon was $158 million, the wholesale value was $374 million. An interesting and valid argument has been put forth that "the processing sector will exist regardless of the size of the commercial fleet. The input requirements of the processing sector will be affected by the amount of the allowable catch, not the size of the commercial fleet. Indeed there need not be any fleet required to meet the input requirements of the processing sector because the fish could be harvested by a system of weirs at river mouths or fish would be supplied from fish farming or ocean ranching. Thus for the comparative purposes, it would be inappropriate to include the economic impact of the processing sector in calculating the economic impact of the commercial fishing sector".[9]

As the west coast commercial fishery heads into the extremely competitive markets of the late 1980's it would be prudent to heed the message contained in the above excerpt if the industry wishes to remain as a contributor to our

overall economic well being. For the purpose of the Institute's comparison the $374 million wholesale figure can stand because the real import of the comparison becomes evident when a comparison of the catch is understood.

The latest figures show that the commercial fishery takes 91% of the total salmon catch, the sport fishery accounts for 4% and the native Indian fishery takes the remaining 5%. The commercial sector appears to generate triple the economic impact as that of the sport sector ($374 million vs $118 million). However the commercial sector has to utilize 22½ times the number of fish to achieve it's $374 million value. On a straight fish to fish comparison a sport caught salmon is worth, at a minimum, 7 times as much as a commercial caught one. It is also relevant, though not included in this comparison, that sport caught fish (aside from SEP) are not government sponsored, whereas commercial revenue is highly subsidized. Pearse has identified the commercial fishery as a net economic loss to the people of Canada.

Jobs are a facet of the sport fishery that are difficult to establish values for because they inter-relate with many other recreational occupations. A sales clerk in a sporting goods section of a department store acts as a good example. Some, but not all of his employment would be directed at the sales of sport fishing equipment. At the other end of the scale tackle manufacturers derive revenues and create job opportunities solely from the sale of goods for angling pursuits. In many cases their goods produced are directed almost entirely at salt water anglers. Victoria tackle manufacturers stand as a useful example. In a brief submitted to the Pearse Commission by the Tackle Manufacturers of Southern Vancouver Island five manufacturers reported sales of $5 million in 1980 dollars. A check of the Victoria area shows that there are 16 businesses manufacturing products for sport angling, not including a number of unlisted cottage industries. Their economic impact and employment levels will add substantially to the $5 million figure. These same five businesses provide direct employment for 100. The Institute has cited this as an example of stable regional economic value from sport fishing, a valuable part of the entire regional economic base. Recent studies of the overall British Columbia sport fishing employment picture indicate that the impact of sport fishing on the province's employment picture is significant. The following table taken from the Sport Fishing Advisory Board's economic paper; Sport Fishing 1984: Economics and Opportunity, expresses this impact in real terms. (Source: Marvin Shaffer and Associates Ltd. and DFO).

	Direct Employment in Person Years	
Expenditure Category	1982	1980
Lodging, campsite fees	206	164
Packages, guide services	94	68
Food	495	435
Travel costs	313	279
Boat rentals	58	48
Fishing supplies, bait	482	471
Household owned boat costs	745	727
Fish processing	37	35
	2,430	2,227

The report goes on to state that the 2,430 person years of employment is derived from only 4% of the salmon catch. While the commercial sector lands 91% of the catch it creates 12,500 seasonal jobs which convert into only 4,200 person years of employment. Out of a total employment picture of 6,630 person years the sport fishery provides 37% from a utilization of 4% of the fish. Further these figures show that the sport fishery employment was on the rise from 1980 to 1982 by roughly 9%.

Although it would appear that the sport fishery is headed for heightened recreational and economic activity, as expressed by the trend and figures on the previous page...there is an ever present fear that it could quickly collapse and disappear. A quote from the Tackle Manufacturer's submission to Pearse is appropriate because it shows the fragility of the industry and expresses the fear felt by those involved in it.

> "We are also a vulnerable industry which can easily be injured by offhand or ill conceived regulation changes affecting sport fishing...a fact which was clearly illustrated earlier this year"[10]

The Institute recognizes that stocks of salmon are depressed, including the species that the sport fishery depends on for its existence. We have no quarrel with proper management, however we question the fashion in which management has been applied. As experienced in 1981, and alluded to in the excerpt above, present management policy has not realized the enormous potential in sport fishing because it is geared to traditional techniques aimed at the perpetuation of the commercial fishery more or less in it's present form. Unless major policy changes take place in our attitude about the commercial harvesting of the salmon resource the negative spin offs will almost certainlycause the decline and ultimate demise of the sport fishery. Furthermore the loss of the sportfishery will do nothing to halt to continuous decline in the salmon stocks. As 1982 catch figures show, after the imposition of the chinook conservation package, sport landings of chinook salmon declined by 33% (84,000 pieces). The commercial catch of chinook salmon in that same year increased by 9% or 124,000[11] pieces. The loss of the sport fishery would only provide a short reprieve for the commercial harvesting sector as it continues on its downward plunge along with the resource.

Looking into the 1990's

For the sport fishery to enter the 1990's with a reasonable prospect of attaining its potential the following must take place immediately while there are still stocks sufficient to halt the decline.

1) The government must establish a policy direction that will ensure a higher priority now and in the future for the sport fishery and all of its related endeavours.

2) The government must revise its direction for Salmonid Enhancement Programs so that greater emphasis is placed on systems that enhance and protect wild stocks of fish. In particular those stocks necessary for healthy hook and line fisheries. Phase I targetted mainly on the net species to the detriment of chinook and coho stocks.

3) The government must embark on an immediate restructuring of the present system of commercial salmon harvesting. To quote Pearse, "the present fisheries policy instruments have failed to encourage practices that would efficiently capture the potential natural wealth of the industry".

Although much damage has been done to the salmon stocks by habitat misuse, industrial pollution and other competing fisheries the main villain, as indicated in many studies, has been an historical propensity to overfish the stocks.

> "Other evidence presented at this Commission's hearings regarding devastating fishing practices of earlier years, the lack of correlation between declines in fish stocks and logging in their dependant water sheds, and the recent successes in rebuilding salmon stocks in Alaska by ensuring higher escapements, all support the conclusion that the depletion of salmon stocks can be traced to the decline of other valuable fish in Canada; namely, overfishing".[12]

Pearse goes on to say that "our catches of salmon and roe herring could be taken with fleets half their present size and at half the cost now expended in fishing"[13].

It is the position of the Sport Fishing Institute that failure to deal with the present overcapitalization of the commercial salmon fleet will have grave consequences for the resource as whole and the sport fishery in particular. A continued policy of reduced catch by regulation without restructuring the commercial fishery will create a situation where the sport fishery is no longer using the resource in the best manner. As the sport fishery faces more restrictions, ostensibly to allow the commercial fleet to continue to function, it will become less accessible, as it becomes less accessible there will be less participation and so on until there will be no justification for an economic sport fishery to exist. The sport fishery is on tenuous ground in 1984. Wise decisions will allow it and the resource to flourish, poor decisions will signal the collapse of the whole west coast salmon fishery in all forms.

Conclusion

'You can't get there until you have seen where you have been' might be an apt way to describe the evolution of the sport fishery in British Columbia. On the positive side the benefits of a well managed fishery are limited only by the scope of the imagination. If the resource is allowed to become self renewing without the continuous and costly infusion of public funds, if the commercial fishery is designed to operate within the capacity of the resource to provide for it, and if the sport fishery obtains the recognition it deserves as a wise resource user; then the future of the salmon, the users and the people of Canada will be that much brighter and more prosperous.

Footnotes

1 Sport Fishing Institute of British Columbia, preliminary submission to the Pearse Commission on Pacific Fisheries Policy, p.1 1981.

2 Georgia Strait Chinook Salmon Status Report (F.J. Fraser).

3 Sport Fishing Institute of British Columbia, preliminary submission to the Pearse Commission on Pacific Fisheries Policy, p.22 1981; source Loftus and Masse.

4 ditto

5 Department of Fisheries and Oceans, Press release, February 1981.

6 Sport Fishing Advisory Board minutes, September 24, 1983; T. O'Reilly, Senior Policy Advisor to the Minister of Fisheries.

7 Sport Fishing 1984: Economics and Opportunities, p.4.

8 ditto

9 ditto, p.5

10 Tackle Manufacturers of Southern Vancouver Island, preliminary submission to the Pearse Commission on Pacific Fisheries Policy, p.3 1981.

11 Department of Fisheries and Oceans, Catch Statistics provided to the Sport Fishing Advisory Board. 1983.

12 Turning the Tide, A New Policy for Canada's Pacific Fisheries; Peter H. Pearse, pp 13-14 1982.

13 ditto, p.76

The Manitoba Lodges and Outfitters Association

A Position Paper

John Clarke

The sharing of a common resource which in its natural state, for the most part, is not visible and not mutually shared by all of the owners, but is in great demand by special interest groups has proven to be a difficult task. The contemporary situation is now made more complex by way of the assertion of aboriginal rights which give some native people exclusive or special rights in certain fisheries. Thus on the Canadian scene we now have two owners of the fisheries. The owners may share mutually but in all cases the aboriginal peoples have at least equal access or in other cases special or total access. In the past the managers of the fisheries have not seen a direct and identifiable return to the owners as being a priority of management. A very difficult situation may have been created by the notion that aboriginal people should only have a right to the resource on the basis that it is used for food or local barter. Seemingly, the conferred rights deprive the users of a management process. Not much understanding is necessary to realize that as the resource becomes scarce the right will necessarily become an exclusive right and **"the tragedy of the common"** will prevail. It could well be argued that the aboriginal people should be given the mandate to use the fisheries resource to the **best economic benefit.** In so doing the **fisheries could be managed to**

respond to supply and demand which would provide best benefit to the owners and provide access to those who are willing to pay. Indeed the fisheries which are not assumed by the aboriginal people could also be managed by a pricing system of supply and demand. Naturally, this suggestion raises the social question of access to the fishery by those Canadians who do not have the **right to harvest** but rather the **privilege** and cannot afford the established price. It is probably this very concern which has deterred managers and politicians alike, from instituting management which would provide a fair return to the owners. **Value added economics have been a great tool which made management feel that the fisheries were, if nothing else, a catalyst in the Canadian economy which did great things.** On the negative side it may be argued that the fisheries of Canada cost the public and the aboriginal people money instead of being a source of income.

Not too many years ago quite a few Canadians thought they had the right to hunt big game. As the big game diminished it became obvious that there were more hunters than animals and better controls were required. This led to the introduction of the lottery or draw system in many parts of the country, and low and behold, Canadians who thought they had a right found out what they really had was a **privilege to harvest the common resource. Sadly, this difference has not been explained to many of the harvesters of our fisheries resources who in fact harvest by privilege and not by right.** Not just a few harvesters have been led down the garden path of significant financial investments only to find that the privilege was granted to too many and that the fishes were too few. In **Canada today there is a need for a much wider understanding of who owns the fisheries, who should benefit and how the resource is to be managed to extract the best social and economic advantage.**

This may sound like a strange position for a commercial renewable resource recreation industry association to take, but is it really? Every harvester must recognize that he is harvesting a resource which is not his, except the aboriginal people, until it is firmly in his possession. The harvester must be aware that the resource upon which he or she depends is sought by other would be users. If **all users mistakenly think that privileges are rights and that their particular privileges should be top on the priority list the stage is well set for confrontation, political hassle and more inappropriate management.** Therefore, it is incumbent upon management, all of the harvesters and the owners to communicate with one another to seek out amicable sharing and owner return solutions. It is not possible for the Canadian Sport Fishery, the Canadian Commercial Fishery or the aboriginal people to find best solutions in a vacuum. There are good management tools available, in most cases there is a good demand for the product. We must break away from notions which were borne in an era of abundant resources and low demand and espouse attitudes which are more in keeping with the realities of the Eighties. **Scarce resources and excessive user demands are now the order of the day.**

The Manitoba Lodges and Outfitters Association sees the first step in the solution as the creation of a Federal Government sponsored **Fisheries Resource Council of Canada.** It is envisaged that the Governments of Canada, the harvesters, and very importantly the owners would all be represented. **There is a great need for users, owners and managers to sit at the same table to revise and plan new approaches.** Meetings of the special interest groups in isolation may be of some use but no real resolves will be found until total communication

for the evaluation of fundamental attitudes is established. We may attribute many of our problems today to the lack of communication between users. **The suggestion of a Fisheries Resource Council is not a cheap suggestion, however, if it succeeded in its goals of revision the rewards would far exceed the cost.**

Discussion

Wilf Carter: Could you define what you mean by owners?

John Clarke: The owners are actually in fact the public and the owners in some instances are the aboriginal people. There are two sets of owners and they actually own the resource. It's a public property, is it not. It's common.

Ken Brynaert: I think this paper represents the first step towards resolving the questions of allocation. I think this is a well thought-out paper and I certainly commend you Mr. Clarke.

Dick Roberts: Have you given any thought to how big the fisheries resources council of Canada might be, ten people, twenty people, fifty? Also, who would represent the public?

John Clarke: It would probably have to be fairly large to accommodate all of the various interest groups and the public. Government may be said to be representing the public but in fact the resources have been really managed to suit the special interest groups. I would like to suggest that one of the reasons why we are in so much trouble is because the resource problems, the shortages and so on, are not seen by the public as being the problem, and this may very well be because they never received any benefit, or perceived benefit, from those resources.

An ombudsman may be required to represent the public. Maybe there would have to be more than one representing the public interests and saying, look, this is a public resource. We had no trouble with oil, we had no trouble with mining industry. We still go to the mining industry and oil industry and say, "hey, you guys are going to pay up, you're going to pay the royalties". We didn't talk about value added economics to them. We just said "hey, we're going to get this money from you". And I would suggest to you there would be a lot of squawking but if you went to the users and said, "how much is it worth for this salmon fishery", or "how much is it worth for this freshwater fishery". And I think in some areas I wouldn't be surprised if we're not too far away from that.

Art Smith: On Mr. Clarke's last point. I'm supportive of that philosophy and I guess it goes back to another aspect of user pay. The public, per se, are more than willing to pay if there is guarantee that the dollars that they are paying are going back into the resource and the management of resource to their benefit.

John Clarke: I think that we have to very aware by the national average that 75% of people get really mixed up about politics here when I say this fish, this resource, belongs to everybody; they think this is somehow a socialism or whatever. But I didn't make the rules of the game. It is a public resource and therefore the managers should have some mandate to ensure that the public gets some return. They all are, and so are the aboriginal people. This is what is so strange about the Supreme Court rulings, that they've ruled the aboriginal

people have access for food but they are denied the right to capitalize on this. They just use it as a protein transfer and that's it. And I think that's a very, very expensive way to use a resource because it is hard on the resource and they don't get the best benefit off it.

Dick Roberts: I want to refer back to Peter Larkin's presentation and ask whether there is a similar development fund anywhere else in Canada.

Ken Brynaert: I was particularly interested in the presentation this morning because what he was talking about was the earmarking of tax money which as we know goes against all the principles of tax collecting in this country. Everything goes into general funds. And any time that we have ever suggested to government the establishment of any surtax, or whatever, to get a designation for that money, it has been turned down, until one week ago. This is interesting. The Cabinet decision, one week ago, will be announcing on the 20th of this month, the forming of Habitat Canada. Now that in itself is not a great event for fisheries people; it is for wildlife people. It's a private corporation. The government is going to provide funding to Habitat Canada by way of a duck stamp. They are going to approve, or they have approved, the issuing of a duck stamp which will be attached, fixed to your migratory bird permit. The funds that are raised from the duck stamp will be designated and transmitted to Habitat Canada. Now that's the small end of the wedge and it may well be that building on that, we may end up with a fish stamp, or at least that is something we should take a look at. I know they are doing it up in Alaska very successfully with trout stamps, and so on, and it may be one way that we can fork money into the coffers for the resource management problems.

Ron Thomas: About a year and a half ago, when we doubled the licence fees for hunting and fishing in the province for virtually everyone, we also introduced something that I never thought would see the light of day. It's called The Habitat Conservation Fund, and in addition to your $10.00 for your licence, you also pay a $3.00 surcharge or tax, whatever you want to call it. It's earmarked money which had never been allowed before. It survived in the legislature this year and I think it is over the hump. It brings in about $1 million and a half dollars. I won't go into the details of it but it is a substantial "donation" which is mandatory. It's like "volunteering" around here. But I back up what Ken said a minute ago; I didn't think we would ever get away with it. By the way, this was done in the '50's in British Columbia and the money all disappeared into general revenue after it had been earmarked. But I detect a lot of user feeling in favour of it and a lot less resistance to special funds.

Ed Mankelow: Relative to the statement that was made, all funds go into general revenue. When I was President of the British Columbia Wildlife Federation, we went back to Ottawa and for a number of years tried to institute a salt water licence in British Columbia. The Minister was Romeo LeBlanc and the Senior Assistant Deputy Minister was Ken Lucas. Mr. LeBlanc, when talking of the licence fees, stated that there is precedent involved in the commercial fishery, whereby, a notation can be made to Treasury Board that this money would go right back into resource as far as the salt water licences were concerned. So there is a precedent.

Archie Tuomi: Now that you mentioned it, yes there is that precedent. How it survived is another question.

John Clarke: We've written to the Honourable Pierre De Bané suggesting this idea of a Fisheries Resources Council and, as no program is any good without at least one commercial, I will make a pitch. I'd like everybody here who can see their way clear to support this kind of National Council. And if you could, if we could get this thing off the ground, I truly believe that we would be on the road to solving some of the fundamental problems that we are now addressing.

NOTES FOR AN ADDRESS BY THE HONOURABLE PIERRE DE BANÉ
MINISTER OF FISHERIES AND OCEANS
TO THE 1984 CANADIAN SPORT FISHERIES CONFERENCE,
FEBRUARY 13, 1984

Mr. Chairman, Distinguished Guests, Ladies and Gentlemen,

May I pause first to express my appreciation for that warm greeting and introduction. I am indeed honoured to be a Minister of Fisheries among such a truly august gathering of dedicants to the resource which I suppose is my foremost constituency. If you will pardon a somewhat migratory pun - I find myself surrounded by true a-fish-ianados.

And speaking of warm greetings, when someone from Eastern Quebec or Ottawa comes to Vancouver and says he is glad to be here, and when the month is February, you can be certain there is a special degree of sincerity in that statement. It is obvious that both the inviting climate and the natural beauty of this province have contributed to making sportfishing one of the most enjoyable recreational pastimes in B.C., and of particular significance in this province. And I am glad to be in Vancouver tonight. The true pleasure however does not arise from the temperature, it is because I have been looking forward with a special degree of eagerness to this occasion. This is a major event in my personal calendar and, in a small way, in the history of my Department and your conference. For this is the first time a federal fisheries minister has addressed this Conference. I know it will not be the last. We have important work to do together - you in your way - and I in mine.

But having said I have come with eagerness, I perhaps ought to have added a measure of masochism, for I am informed that in one fell swoop I have dealt a double blow to British Columbia's most celebrated sportfishing journalist, Alec Merriman, who wrote recently that I might spell out the New Pacific Fisheries Policy when I spoke here on Wednesday.

Well I think its two days earlier that I am speaking and will be some weeks yet before I will be in a position to spell out details. Some of you are already aware - indeed acutely aware - that Pacific Fisheries Policy has been under a process of thorough review, and this includes, specifically, policy covering those sportfisheries which have remained under federal jurisdiction. I will soon be presenting my recommendations to Cabinet but because of timing I cannot speak to you about hard, fast plans for the future. And as I look around me here this evening and see a number of the familiar faces of some of Canada's foremost experts I am reluctant to attempt to be too technical in my comments.

While I cannot yet speak of hard, fast plans I can tell you about some basic principles. There is nothing tentative or unsettled about those. I am here tonight to tell you that I intend to try my best to ensure that future federal fisheries policy will reflect a far greater recognition of the economic and social importance of the sportfishery.

By any reasonable assessment sportfishing is a major economic asset, - an indispensable centrepiece in Canada's national recreational and tourism industries. And it is my opinion that the time has come to manage it and develop it to its full economic and social potential.

Again, although it is still too early for specific announcements, you can expect to see this new emphasis on sportfishing reflected in tangible policy changes and actions within my Department. It is my hope that this will be a lasting mark I will leave in my Department.

We have redeployed financial resources and people to help sharpen our focus on sport fishing. We hope to do more in this direction but again it is still too early to talk in definitive terms.

While I speak of change however, one thing has not changed! It is that the foremost challenge facing the fisheries at this time -- and I mean all fisheries, sport, commercial and native -- is resource conservation - and in many cases, the unfortunate, but necessary step beyond - resource rehabilitation.

As this audience knows, pressure on the resource has been continuing to increase. Many important stocks are in a state of extremely serious decline, and these include stocks which are considered vital to sportfishing. On this coast, for example, the current total catch of salmon is less than half of what it used to be and could be. Some stocks of the favourite sportfishing species, chinook and coho, are dangerously close to collapse. And I hasten to add that; because these particular species are the favorites of sportfishermen does not mean that their depletion has been caused only by sportfishermen. But they must contribute to recover, and I am pleased to add that they are doing so. In 1981, B.C. sportfishermen agreed to an arrangement with my predecessor called the "Seven Point Program" which among other things called for bag and season limits.

The longer cycles of these particular species make it difficult, as yet, to fully assess the result. Perhaps further restraint may be necessary.

We also have problems on the east coast. Atlantic salmon, referred to down east as "The King of Sportfish", is also in very serious difficulty, the details of which, I am sure, you will hear more as your Conference progresses.

Conservation then is the main challenge. It is a challenge for all fishermen - sport, native and commercial - and all fishermen will have to share in meeting that challenge. But rebuilding can be a very complex process and governments too - and yes, - I already hear the echoing reverberation of your thoughts - yes, politicians will also be faced with bitter pills and difficult decisions which must be taken. And you are looking at one, by the way, who does not relish being in a position of having to assemble the pieces of a dizzying puzzle, the solution of which is predetermined to result in an imperfect picture.

To give you just an idea of the complexity to which I am referring, in British Columbia we are presently looking at three scenarios which range from a mere halting of decline to the most rapid achievable rebuild. The alternatives range from an increase in catch of 10% in 12 years/ 25% in 20 years to 25% in 12 years/ 80% in 20 years. Needless to say - the more ambitious the rebuild target, the greater the requirement for cuts in catch in the near term. But moreover, I am advised that cuts in catch alone are not enough and to achieve even these targets will also require significant change and disruption in fishing patterns to take pressure off mixed stocks.

And then even when we know, or think we know how much fish we can take overall, how do we share out the harvest among competing user interests?

For B.C. sportsfishermen, the word I am about to utter has been considered unthinkable never mind merely unspeakable. So be seated and hold your chairs until the initial shock passes, **"ALLOCATION"**.

I think I saw Ralph Shaw move so I assume the word did not bring instant death.

ALLOCATION - to the resource manager - panacea, utopia - to the resort or charter operator - anathema. I do not propose to deal in great depth with the question this evening for I know it has been the subject of briefs presented to the Conference and will no doubt be a subject of panel discussion. I do not wish to preempt, in any way, those interchanges. I do want to say however that neither the word nor the concept can be avoided, nor should they be. In dealing with a resource under increasing pressure, allocation is bound to be occurring in practice whether or not it is known by that name, and whether or not it is a consciously decided upon factor - it is bound to be occurring. I mean to say that when the man who promotes the reputation of being the "Best of the West" - known to his close fellow sportfishermen as "Oak Bay Fats" and to every sportsfisherman in British Columbia as Bob Wright - when even that man cannot land the Minister of Fisheries a chinook salmon - then one way or another - allocation is probably taking place. To leave this issue and difficult question - I suppose I should say "perennial" question, with you - let me suggest that; by the same token as standards of economic measurement are different as between the commercial and sports sectors, it seems clear to me that the very different methods employed tend to dictate different standards and methods of allocation.

Perhaps it must be recognized as well even in this national forum that the differing environs from fishery to fishery spell differing standards, processes and methods. I know, for example, that while Dr. Carter and Mr. Wright share exactly their views on priority - and they both chase salmon - they might see allocation in very different ways. My Department, and I am sure other agencies, will be interested in the results of your own deliberations.

In any case these are concerns only if we have fish. And we will not if we fail to be vigilant about fish habitat. In this forum I shall not waste excessive time preaching to the converted but we must periodically remind ourselves that this is the foundation of all the fisheries. Shortly after assuming this portfolio I directed my officials to begin work on the development of a national policy for preserving and rehabilitating fish habitat in Canada. A preliminary discussion paper on the subject has been circulated. Consultation is well underway and concrete policy should soon be taking shape.

But that policy will not be without its own limitations and a very prominent one comes immediately to mind. Without a doubt, the gravest threat that Canadian sportfishermen have to worry about is the inexorable destruction of key resources by acid rain.

Here on the Pacific Coast, it may seem like a faraway problem. Your fellow-anglers in central and eastern Canada don't see it that way. And even you westerners should not take it for granted that your fisheries will escape

forever. Studies have shown that British Columbia isn't exposed to the volume of acid rain that we see elsewhere. Nevertheless many lakes and rivers are in exactly the kind of terrain which is most vulnerable. In simple terms, you don't have the sources yet, but you do have the susceptibility. Without vigilance, it could happen here.

In Atlantic Canada, studies by my Department have linked tragic losses in salmon rivers in southern Nova Scotia to acid rain. In Ontario, a survey has confirmed the acidification of 1,600 lakes. These are in the heart of some of the most popular sportfishing areas in the world -- holiday country for Americans as well as Canadians. The damage is being done from both sides of the border -- and it is happening on both sides of the border as American sportfishermen know.

To Canadian and American sportfishermen in this audience let me call acid rain what it is: a mortal threat to sportfishing in vast areas of our two nations. Let me remind you too that it is not a static, arrested danger -- it increases with every downpour. The damage, eventually, will be irreversible. We will not prevent a disaster unless we take action to reduce emissions on both sides of the border.

There is something uniquely unpleasant about acid rain which this audience particularly should think about. It is possible to escape from some forms of pollution. Some sportfishermen do it all the time. By driving far enough, or even flying far enough, they reach the untouched wilderness. If you travel far enough you can always find rivers and lakes with no factories or sewage plants on their shores, with no dredging taking place in their channels. But you cannot out-run acid rain. The wilderness is being polluted now as thoroughly as the settled areas.

We don't need international-finger pointing or accusations. This is a continental problem -- polluters and their victims exist on both sides of the border. We don't need delay either and we cannot afford it. We do not understand every last aspect of acid rain -- maybe we never will. We certainly understand enough to know the damage that has been caused and how to stop it. We also know that we do not have unlimited time in which to act.

Sport fishermen in Canada and the United States make up a formidable constituency in both nations. There can be no more useful area for you to apply your influence than in working for speedy action to avoid this impending environmental catastrophe. In this respect, although satisfactory resolution continues to elude us, and no matter what, if any, are your partisan affiliations I believe we should all pay tribute particularly to our present Minister of Environment, my friend the Hon. Charles Caccia and John Roberts his immediate predecessor for their tireless efforts in trying to limit and reverse this threat.

But of course there are also bright spots on the horizon for sport fishing. I cannot, of course, speak for other jurisdictions but on this coast last year I promised to give the sportfishery higher priority in Pacific Fisheries Policy and I have directed my Department to develop proposals for moving in this direction.

That is not to say, in any way, shape or form that I have any intention of abandoning or abrogating my responsibilities to commercial fishermen. Not for one minute. Canada's commercial fisheries continue to be an important and valuable sector of our economy. Many of you from eastern Canada will know of the considerable attention and effort I have expended in dealing with the problems of the east coast fishery and those of you who live here in B.C. are well aware of the ongoing consultations and efforts to develop a program to restructure the Pacific salmon industry and restore it to economic stability in the face of serious decline in the stocks. And I will continue to strive in the interests of my west coast commercial constituents.

Alternatively commercial fishermen will have to give greater recognition to the legitimate interests and aspirations of both the primary and secondary sectors of the B.C. sportfishery. Recent data indicates that when jobs, permanent and seasonal are translated into person years, the sportfishery accounts for a very significant portion of all employment created by the Pacific fishery. These too are livelihoods!

On a national basis, 1980 was the last year in which sportfishing was studied in depth. In that year sport fishermen spent $1.1 billion and invested another half-billion on sportfishing. Those figures represent only direct spending and investment. Sportfishing however is the central attraction for a whole complex of other activities. When the economic activity generated within that circle is calculated the figure rises to $2.4 billion. We can no longer conveniently turn a blind eye to these factors.

It has been suggested, in what seems to be very academic argument, that somehow the economic returns from sportfishing are not real. The argument is that if anglers didn't spend their money on fishing they would spend it on something else. I find this argument unscientific in the extreme. I don't know of any sure way to predict how people who stop sportfishing in Canada would spend the money they save. Are we sure they wouldn't spend some of it on more travel in the United States or overseas? And I certainly don't know what would happen to the money spent on sportfishing by one million Americans and other foreign visitors each year.

I sincerely believe it is time to change our approach and to think positively and creatively about the potential of this sector. To think for example of its potential, if properly developed, in communities where there are few, if any, alternative opportunities.

I visited the Boat and Sportsmen's Show at B.C. Place on the week-end. The display of goods and services was most impressive. From tiny gadgets to large vessels and the promotional photographs of people catching salmon at lovely fishing resorts. It was easy to see the economic value in the array of products. It was easy to see the intrinsic value in the smiles on the faces.

Ladies and Gentlemen, I do realize that I am preaching to the converted, but nevertheless this is a public event and I felt it useful to put some of these thoughts and facts into the record and perhaps help the average, tax-paying citizen to better understand the value of this industry.

I have said I made a commitment and I will be endeavouring over the coming weeks and months to develop measures to give meaningful effect to that commitment within my jurisdiction.

The fact is that sportfishing is a Canadian asset - in both social and economic terms - a national treasure. It enriches our country in tangible ways. We are fortunate to have the resources, the water and the fish stocks to support that industry. It is both an opportunity and a responsibility to make the most of these advantages. For my part, within the reach of my authority, I will be trying my best to provide an enhanced and favourable environment in which to do that. Thank you.

PROVINCIAL, TERRITORIAL, AND FEDERAL MANAGEMENT AGENCY GOALS AND PROGRAMS

Newfoundland and Labrador

Doug Brown
Director, Resource Programs, Inter-Governmental Secretariat

First off, let me explain I represent two or three different departments' interests and concerns at this conference because the sport fishery tends to be something that falls a bit between the stools in Newfoundland.

Most of you are familiar with the importance of fisheries in Newfoundland. Commercial fishing has been the economic and social foundation of our settlement for 400 years, providing a business and a way of life for over 600 communities. But for almost as long, Newfoundland has been well known as the sportsman's paradise with seemingly unlimited stocks of salmon and trout for Newfoundlanders and visitors alike. This has happened elsewhere, but perhaps a little later in Newfoundland, so even our abundant recreational resources have diminished and a relatively small population is now unhappily faced with limits on their catch. This is not only for fish but other wild harvest such as moose, caribou and whatnot. Many, if not most, Newfoundlanders today feel very strongly that access to salmon, trout and game should continually be readily available and open to all as are the cod in the sea. There is a very strong social reaction against limitations on catch and hunting and fishing of any kind. This happens everywhere, but I think there is sort of stronger, perhaps residual, element of that in Newfoundland. But as development of all our resources increases, and we meet competing demands on fish habitat and on the resource itself, the time comes to determine what is the separate role and the needs of the sports fishery itself. Sports fishery is growing in importance to our province.

The species in demand are salmon or trout but there are tremendous recreational benefits from cod, tuna, mackerel and other seacoast fisheries as well. Cod fishing for domestic use is unregulated and open to all in Newfoundland, as is the trout fishery where residents are not required to have a licence.

The 1980 National Survey estimated the total contribution of sport fishing to the provincial economy at $20 million per year. This can not match the half billion dollar commercial fishery, but it is significant nonetheless. Salmon fishing is the king of sports fishing, I suppose, in Newfoundland as it is here in B.C. and elsewhere. In 1983 we had an estimated 40,000 licenced anglers in Newfoundland of whom only 5% were non residents. The 1980 survey estimated their expenditures to be $6.5 million compared to the commercial salmon harvest where there are 5,300 licenced entrants with a total of landed value in recent years of four to five million dollars. This commercial catch represents 90% of the total Canadian commercial harvest of Atlantic salmon. It has considerable social and economic importance for our inshore fishermen, yet it is clear that for a smaller proportion of the catch within the province of salmon, the sports fishermen are making a larger contribution to the economy. Salmon and trout angling are a key attraction to the non resident tourist industry as well. There are approximately 30 fishing camps and most of them are providing among the best angling in Canada. They generated a revenue this past year of about $800,000. These establishments have potential to expand as a vital component of the tourism sector.

Regulation of the sports fishery in our province rests with both governments. Since 1949, the confederation with Canada, the federal government has had exclusive jurisdiction over resource management for both inland and sea coast fisheries but the province retained the right, since 1949, to issue recreational licences. These are administered by the Wildlife Division of the Department of Culture, Recreation and Youth. Also, the provincial Department of Development's Tourism Branch promotes and regulates the outfitting establishments and other tourism facilities. Finally our Department of Fisheries, while primarily focused on commercial harvest, undertakes aquacultural development and other programs of benefit to all resource users. The province's role, overall I think is fair to say, has been quite minimal and pales in comparison to the manpower and the mandate that is available to the federal Department of Fisheries and Oceans. And the sport fishery's needs and concerns play second fiddle to the commercial fishery by both governments in Newfoundland. This is quite clear, and I guess understandable, when you consider the levels of people involved and the value of the commercial fishery in Newfoundland.

However, issues of conservation, allocation and resource development which impinge on the sport fishery have arisen and require both governments to review their policies and programs in a new light. The issue of habitat protection takes on greater urgency every day in Newfoundland and elsewhere. The non-angling public has been perhaps slower to respond to resource depletion from steady progress of forestry and hydro electric and other developments in our province. Through the province's responsibility for environmental quality, we are just beginning now to flex our muscles in terms of new environmental protection and excessive regulation. Federal enforcement of the Fisheries Act plays a vital role, of course, which was dependent in the past for its success on a very flexible attitude on the part of the officials who administer the Fisheries Act in Newfoundland. Such attitudes and co-operation must continue. And all resource managers must face the realities of multiple use of land and water resources. We cannot afford to focus exclusively on single use resource requirements, whether this is for salmon habitat or any other resource. When speaking of conservation, I must also address the issue of interception of the Atlantic salmon by our commercial inshore fishery. We of course recognize the catches of salmon destined for spawning rivers in the Maritimes and Quebec presents a conservation problem, but we cannot agree with the position of some that it represents the main source of resource depletion for those rivers. The data simply does not support a conclusion that commercial catches in Newfoundland are the culprit in Atlantic salmon conservation, so we cannot support measures which focus exclusively on reducing the Newfoundland harvest to the exclusion of a more comprehensive approach to salmon management. I must say that it is not to say that the government in Newfoundland does not support reasonable measures to conserve the resource. I think it would be fair to say we would support seasonal reductions, buy-backs, compensation programs, any number of measures, provided they took into consideration the incidence of interception and focused on those parts of the province where the problem is greatest and left alone those parts of the province where it is only relatively incidental. Thus allocation policies must continue to meet the realistic, economic and social requirements of all users of the resource. Public policy, in general, should be focused on habitat protection and on enhancement rather than solely on debates on whose access is to be eliminated. So in our view the commercial harvest of Atlantic salmon should continue as a vital part of the inshore fishery and commercial users should bear their share but not the brunt

of measures taken to conserve the resource. Resource use conflicts can over the longer term, we hope, be reduced if the opportunity to enhance the resource are taken now.

We do not have a salmon enhancement program to speak of in Newfoundland today. There are a few projects underway by federal Fisheries and Oceans, but there has been a collective federal and provincial planning effort underway for a number of years which recently culminated in DFO's plan for Newfoundland and Labrador salmon enhancement. The potential for using a variety of enhancement techniques is very great in Newfoundland. So great, that we could expect a doubling of Atlantic salmon production from Newfoundland and Labrador rivers over a ten year period. The costs associated are also significant, as preliminary estimates put the costs of a ten year program at $45 million. In our view, such costs are justified from a cost benefit analysis perspective. The province of Newfoundland fully supports the proposals in the report on salmon enhancement for Newfoundland and urges DFO to begin now to implement the policy. The potential for improving habitat productivity in Newfoundland is significant and should not be delayed while plans for other regions are being developed and debated. We are ready to go now.

Finally, there are a few other issues which have and will be addressed this week which I will touch on briefly. Collection of statistics and refinement of economic measurement of the sport fishing industry is essential to a public and private sector recognition of this industry's role. Our plans are to continue to support national surveys. Also, basic scientific research into the sport fishing resource must be increased in areas of critical deficiency. In Newfoundland we can point in particular to the very incomplete picture we have on the population of salmon in many lesser rivers and of trout throughout the province.

And finally, I might mention that our provincial Wildlife Division and DFO are establishing pilot projects for licencing the recreational fishery by individual river systems. This would include encompassing the commercial camp development on those rivers and using methods such as were discussed yesterday to maximize sports opportunities without adding increasing net effort on the resource. But these are at a very discussion stage level at the moment.

This then, Mr. Chairman, briefly reviews our main concerns from our perspective. We are admittedly in the province not the manager of the resource so we have the luxury of saying things without having the responsibility of carrying them out. However there are programs and policies related to tourism development, recreational licencing procedures and methods, and aquaculture which the province must address, and the message I hope to bring back to Newfoundland from this conference is that all of us must get our houses in order and recognize the importance and opportunities for sports fishing in Newfoundland and Canada as a whole.

Discussion

Tim Surette: I'd like to ask Mr. Brown if his government would be sympathetic to contributing to a buy-out program to reduce interceptions and whether they would be interested in a surcharge on recreational licencing?

Doug Brown: I can't speak for the government in terms of whether the government will be prepared to put public funds into a buy-back or compensation program of some sort. However, speaking personally, it seems to make sense to me that resource users of all kinds should contribute. So in terms of the recreational fishery I think that makes sense, but whether the provincial government wants to contribute to that, I can't say.

John Clarke: The individual licencing of river systems, are those licences sold on a daily basis? And if you did go to that individual system, do you suppose that you would assess the rivers as being good for so many angler days per annum and issue daily licences accordingly on that basis, or would someone just be able to get a licence to fish that river for 365 days or as long as the season is open?

Doug Brown: This is a pilot project that is being discussed and it isn't in place yet. There is nothing being sold at the moment. Right now, the licences are general licences.

Wilf Carter: I have a question for Mr. Brown. What is the province's position with regard to tagging programs? Do you think the province of Newfoundland would support the introduction of tagging in the recreational salmon fisheries?

Doug Brown: That is something that has been discussed for quite a while internally. So far, I guess it is fair to say that the Minister of Culture, Recreation and Youth hasn't been willing to go forward with the program. But I think that in some instances officials are convinced that it may well be the way to go.

Wilf Carter: I think we all recognize that there is going to be a program to remove some commercial fishing licences and that there is going to have to be compensation for that in some form. We are on record as supporting compensation for permanent buy-out and being agreeable to participate in that kind of a program. I spoke with the Minister last evening and asked what sort of mechanisms do we have in Canada in view of our treasury board system whereby everything has to go into general revenue. I asked what sort of an arrangement can be made if there is some mechanism to raise money for a buy-out program to get that money back into DFO? He said that there was no difficulty doing that and that was confirmed by his Associate Deputy Minister. The Minister said it has to go into the general treasury but he can negotiate with the Minister of Finance at Cabinet level in order to ensure that that amount of money comes back into the department's budget. So the Minister did confirm last night that those kind of special funds can be recovered by the department and that is a very encouraging piece of information.

Nova Scotia

Inland Fisheries Recreational Guidelines for Nova Scotia

Barry C. Sabean
Manager, Wildlife Resources
Nova Scotia Department of Lands and Forests

To preface my remarks, I'd like to give you a quick overview of the inland fishery in Nova Scotia beginning about 13,000 years ago when the province was more or less completely glaciated for the last time. This was effectively the

new beginning as no freshwater fish are believed to have survived that glaciation. From the standpoint of freshwater fish, Nova Scotia is a zoological island. It's only land connection with the rest of the continent is through a narrow isthmus and the result of this is an impoverished list of only 38 species inhabiting the province's freshwater, of which five were introduced. We are left with many vacant niches, particularly with respect to forage and warm water fishes. We are also lake rich and fertility poor. In fact Nova Scotia has almost seven thousand lakes larger than one hectare but the average size is only about 34 hectares. Historically, the lakes and associated streams have provided good fishing for brook trout, but they are neither productive nor large enough to have supported any commercial fisheries. With respect to inland water, allocation, in the narrow fish sense of the word, has never been a significant problem because of the lack of commercial fisheries. The only inland commercial fishery presently operating are for the gasperaux and eels, neither of which is used particularly for recreational purposes. There is of course a problem with allocation decisions respecting Atlantic salmon in coastal waters but this issue has been already discussed by several speakers yesterday. We are also fortunate in Nova Scotia to have an angling act which provides anglers the right to trespass along the banks of any river, lake or stream for the purpose of lawfully angling. Anglers in Nova Scotia traditionally fish for salmonids and in fact they are generally reluctant to pursue other species. Brook trout receive about 70% of the angling effort but they are easily exploited through their vulnerability and a basic lack of water fertility. The Nova Scotia provincial government was not actively involved in the management of the inland fishery until the formation of the Wildlife Division of the Department of Lands and Forests in 1958. The provincial program has gradually expanded through time, with the introduction of angling licences in 1963, fish culture capabilities in 1968, intensive habitat inventories through the '70's, and more recently, in agreement with Fisheries and Oceans, the assumption of a major role for provincial freshwater fisheries management needs in the '80's.

Presently, the inland recreational fishery of Nova Scotia provides licensed residents of the province with about 1.3 million days of enjoyment per year. Anglers directly spend approximately 22 million dollars (1980) in pursuit of their sport, thus contributing substantially to the provincial economy. All told, 22% of Nova Scotians fish for sport on an annual basis. It is obvious therefore that Nova Scotians place a high value on recreational fishing.

In light of the significant economic value and the inherent social and health benefits which Nova Scotians derive from angling, the Nova Scotia Department of Lands and Forests presents the following guidelines in order to give consistent, rational management to the inland fishery. A detailed management strategy will be prepared subsequently based on the goal areas outlined below.

Statement of Intent

The fisheries resource of Nova Scotia's inland waters will be managed in a manner designed to yield optimum benefits to the residents of Nova Scotia within the biological constraints of the aquatic habitat. Inherent to that premise is the management of the fisheries on the basis of sound ecological principles which seek to encourage the functioning of stable biological systems.

Management Guidelines

The following section outlines the areas to be considered in the formation of a management strategy and the guidelines to be followed in its preparation.

1. Conservation

The fishery will be managed in a manner which is designed to produce a sustainable yield.

Management decisions will be based on the best scientific evidence available.

Protection of aquatic habitat will be a high priority, necessitating the need for effective coordination between several provincial and federal government departments.

Regulatory controls will be applied so that optimum use of the fisheries is not severely impaired and a diversity of angling opportunities are provided.

Enforcement agents will serve not only to prevent violations but will also function to provide communications between the resource users and the resource managers.

2. Allocation

The prime use of the inland fishery resource is proposed to be for recreational purposes. Commercial inland fisheries will continue to be secondary and focus only on those species which are of little recreational importance (eg. gaspereau and eels). These fisheries should not unduly interfere with populations of fish important for recreation or with the recreational use of such fish.

Commercial harvesting of species in coastal waters will be done in a fashion which attempts to minimize impacts on anadromous recreational species. Where other provinces or counties are in a position to harvest anadromous species destined to return to Nova Scotia, the federal government will be asked to negotiate agreements which protect the interests of Nova Scotians.

3. Research and Assessment

An active research program will be designed to provide information on defined management problems affecting the fishery.

A continuing assessment program will be conducted to monitor physical, chemical, biological and social factors affecting the fishery. This program will include lake and stream surveys, population inventories, creel censuses and angler surveys.

4. Tourism

Sport fishing will be recognized as an important component of the tourist industry that will provide economic benefit to the people of Nova Scotia.

Underutilized species will be given a high priority such that resident-use opportunities will not be jeopardized.

Tourists will be encouraged to take advantage of a resident-use opportunity only where it can be demonstrated that there are economic benefits accruing to Nova Scotians.

5. Economic

The economic value of the recreational fishery will be assessed on a regular basis. The formulation of sound defensible methodology will be pursued.

Where practical, such information will be coordinated nationally to provide comparable Canada-wide statistics such as those gathered in 1975 and 1980. The economic data may be utilized to make decisions where use-conflicts occur.

6. Communications

A clear line of communications will be maintained with the user public through such media as N. S. Conservation, reprints, technical reports, audio-visual presentations, workshops and direct communication by enforcement personnel and other staff.

Such communication will attempt to educate the public on matters such as provincial programs, habitat needs, ecological issues, resource conservation and underutilized species.

7. Coordination

Provincial agencies involved in the management of the inland recreational fishery will have clearly defined mandates and coordinate closely any areas of overlapping or complementary responsibilities.

The province will also coordinate with federal agencies, notably Fisheries and Oceans. Mandates will be clearly outlined and the major provincial and federal agencies will meet at least once a year to outline their respective programs and ensure a clear understanding of goals and direction.

8. Funding

Resident and non-resident anglers will be required to buy licenses (with certain exceptions) and such license fees will attempt to cover the real costs of managing the fishery while recognizing the monies contributed to the province through economic activities associated with fishing.

Additional funding sources will be investigated.

Voluntary contributions (particularly labour) will be utilized where it is practical to do so.

9. Resource Development

Resource development opportunities will be catalogued and undertaken as funding permits with particular emphasis on areas where demand exceeds supply. Examples of such programs are stocking, introductions, reclamation, liming, fertilization and installation of habitat devices.

Public participation will be encouraged on projects where such input and manpower is advantageous.

Discussion

Frank Ring: In your presentation there was no reference to native fisheries in Nova Scotia. Is there in fact no native fisheries conducted down there or what is the situation there?

Barry Sabean: Presently there is only one rather minor native fishery that has only come up within the last couple of years and we haven't particularly addressed it from the provincial standpoint because the negotiations so far have been strictly with the federal agencies and the Indian bands. In reply to the question regarding the scope of our greater management intentions, our role with respect to anadromous species will remain very much the same, which is strictly in the licensing and coordination of our other programs with the federal agency. Our major management responsibilities will be with the non-anadromous or, in the case of speckled trout, semi-anadromous species. Speckled trout would be the major responsibility. As a point of interest in Nova Scotia, between ourselves and the federal agency, we did initiate a Nova Scotian tag licence system for Atlantic salmon in 1983, the year in which we licensed approximately 7500 recreational salmon anglers. That number will give you an idea of the relative importance of recreational fishing for salmon in Nova Scotia, because 7500 is not a large number compared to the licensing that goes on in Newfoundland or New Brunswick.

Prince Edward Island

Art Smith
Director, Fish and Wildlife Division, Prince Edward Island

This conference is very timely as I think all of us understand where we are with respect to dollars in these days of constraint. In Prince Edward Island, we have a recreational sport fishery with major commercial overtones in ocean waters. Our inland fishery is a very restricted fishery, primarily salmonid in both non anadromous and anadromous states. The value of sport fishing to the province in inland waters derives from the approximately 2000 non residents that partake in the inland sport fishery when they are in the province on their summer holidays. More importantly from the tourist point and commercial aspects is the opportunities that are available to both resident and non resident in the deep sea and the tuna charter operations. These are commercial fisheries by nature. I guess like most jurisdictions, we run into problems because under the BNA Act, all our fisheries are controlled by the federal government. While we have enjoyed informal good cooperation, I think the time has come now to develop a more formal arrangement, similar to what Barry has alluded to, a management strategy where the aspirations of the province are recognized and both agencies can cooperate in joint management ventures that will realise the most benefit for both dollars. We are presently involved with conservation and habitat management. As well, we have looked to the federal government in the pursuit of new angling opportunities in selected areas with guaranteed access by the public. Our fishery revolves around a stream, pond if you will, type of fishery. We have over 600 small impoundments in the province. The majority of our ponds are private and, under our Summary Trespass Act, that means that the owner of that property has exclusive control to the rights to his property, so the opportunity is really in the hands of the owner. If he wishes to negate your opportunity, he can do so. Through an acquisition program, a lease program, we have guaranteed access to the fishery resource in the order of 10 to 15% of those impoundments. They represent a great deal of the acreage in the Province under water and so through the acquisition program we are into guaranteed access. As well, it goes back to why we are involved in Atlantic salmon. I've taken the tack that I don't see why an Islander should have to go to the mainland or off the island to fish Atlantic salmon when we've had historical records of good runs. This presents an

opportunity and new experimentation should be tried, and I think we should endeavour to do that. On the tourist side, our inland sport fishery offers a great potential for increasing the recreational dollar influx into the province. However, our best anadromous fishing is confined to the early months of the season, late April or early May. This certainly coincides with the objective of the tourist department to garner more dollars in the shoulder months of the tourist season. At present we are pursuing the idea of adding this on, if you will, to the accommodation side of bed and breakfast. The idea of making some goose hunting opportunities available in conjunction with bed and breakfast operations will also be pursued actively this fall. As well, the bread and breakfast potential for the tourist industry in the early months of the spring will be addressed. The whole idea of fishery management and opportunity for economic gain hinges on cooperation between the agencies that are involved both in direct jurisdiction and ownership, and I have taken the view that the only way that we can improve our fisheries to the benefit of all is through the active pursuit of a management agreement with such stated goals and objectives. We have enjoyed good co-operation from the Halifax office but with the growing pains of expansion of the Gulf Region I detect a lack of input into the province from the federal government and I think that from this point that we need to develop a more co-ordinated and positive program. On user groups, the input of the sport fishermen is acknowledged. Our sport fishermen have given us a great deal of support and direction as to where they see our efforts should be directed to the benefit of all. I'm not really in a position to present to you today a policy statement. I can present what I would like to see, but it would be incomplete without gaining the input of our tourist department. So far we've never been able to sit down and formally develop a policy statement with goals, objectives and strategies to define purposefully where we are going now and in the future. But from the Fish and Wildlife Division's inland fishery viewpoint, it is certainly conservation, the wise use of the stocks, and the maintenance and improvement of habitat to the benefit of all.

Discussion

Glen Jefferson: You have a very valuable tuna fishery in PEI, and I was wondering if you were giving any consideration to the expansion of salt water fishing in PEI to other species?

Art Smith: Programs to do that are in place now. Actually, I don't really profess to say that based on dollars, one fishery is more valuable than another and thus the allocation should go there. For example, in the tuna fishery, the commercial value of the tuna fishery strongly outweighs the recreational value because the fish is worth a couple of dollars per pound. With deep sea charters, a lot of fish, like cod, haddock and mackerel, offer a great deal of economic benefit to the province's tourist business in the months of July and August and it's our goal to extend this into the shoulder months.

New Brunswick

Summary, Inland Sport Fisheries Plan for the Province of New Brunswick

Bill Hooper
Fish and Wildlife Branch, Department of Natural Resources, N.B.

This document has no official government status and is a guide formulated by New Brunswick fisheries biologists to assist in direction of their management efforts in May, 1981, and revised in 1983.

Introduction

Until recently inland fisheries resources in New Brunswick were managed with little care or thought. Indeed, our past negligent approach is obvious on such rivers as the St. Croix and Saint John, where wasted forests, denuded soils, muddy streams and scarcity or disappearance of important fish species has occurred.

In the past 10 years the New Brunswick Department of Natural Resource has initiated management of its lands, waters and wildlife with perception, applying professional competence to produce continuing benefits to society. The Department is now making leadership strides to adequately respond to the needs of the Province's citizens for natural resource products through integrating natural resource programs (fish, wildlife, lands, forests, mines and waters).

The following fisheries management plan outline has been prepared to set in motion a chain of events to ensure the Province's citizens can and will benefit from proper use of our potential and existing fisheries resources in coming years. The plan is based on thousands of days of field work throughout the Province, as well as thousands of hours of consultation and planning by headquarters and regional biologists.

The Province and the Federal government should arrive at an agreeable policy for the Province to handle inland fisheries, evaluated in terms of what is best for the fisheries resource and the people of New Brunswick. This is fundamental if the following plan is to be accepted, financed and implemented with full confidence and optimum efficiency for greatest people benefit.

Inland Fisheries Management

Province-Wide Goal

- Provide, protect, enhance and manage New Brunswick's inland fisheries and fisheries habitat for public benefit; maintain or, where necessary, improve angling quantity and diversity where demand is evident.

Objectives

- Provide and distribute brook trout, lake trout and Atlantic salmon for ongoing and developing sport fisheries programs province-wide; provide for, in coordination with other management techniques, 1.9 million angler days of sport fishing of suitable quality and diversity by 1985; provide 2.3 million days by 1991.

- Provide disease-free brook trout eggs for use by other public and private facilities by 1986 or earlier; disease-free lake trout and landlocked salmon eggs for public and private use by 1985.

Strategies

- Strategies utilized or which will be utilized to achieve province-wide objectives are grouped in five categories; habitat protection - enhancement, regulations, administration, public relations and biological management. The diversity clearly demonstrates the need for formal, comprehensive planning and coordination by resource management agencies.

Habitat Protection-Enhancement

- Current provincial environmental protection program should be No. 1 priority for all government agencies superseding all but public health and safety; we should seek to coordinate plans and objectives of other natural resource interests.

- Obtain public land control adjacent to all waters especially water near or within urban areas.

- Secure control (purchase) riparian waters for development and improvement of habitat for game fish production; establish a province-wide priority acquisition list.

- Create a statutory requirement for "green belt" zoning adjacent streams on private lands.

- Develop and standardize criteria for investigating and enforcing water course alteration permit conditions.

- Upgrade personnel inspecting habitat related projects as well as recommending habitat projects.

- Develop and apply techniques to improve existing spawning, nursery and adult habitat and provide artificial spawning areas where necessary.

- Inventory and classify waters, especially wild salmonid producing waters; estimate total productivity of streams (temperature-alkalinity - low flow criteria) and lakes (MEI).

- Initiate action and improve habitat on Crown lands.

- Identify and protect critical fish habitat.

- Restore degraded habitat as well as create new habitat where none previously existed to compensate for habitat loss in other areas.

- Monitor or arrange to have monitored effects of industry and municipalities on water quality, habitat and fish populations.

Regulations

- Develop flexible regulations for angling waters.
- Protect fish during vulnerable life history periods (spawning).
- Regulate angling harvest by legislation (quotas, gear, seasons, etc.); design fishing regulations to harvest natural fish surpluses, establish regulations to provide a full spectrum of recreational fishing in N.B.
- Restrict access to specific resources by controlling the level of services and accommodation that may be provided.
- Determine and enforce commercial quotas in inland waters to determine harvest and optimize spawning escapement.
- Pursue effective enforcement of regulations; upgrade protection effectiveness.
- Maintain and further "development-free" zones adjacent water areas.

Administration

- Acquire inland fisheries management responsibilities from the federal government.
- Formulate and obtain supplemental (alternative) management funding through federal-provincial agreements, public or private sector grants for project development.
- Continue to develop methods to permit further income from use of public resources (e.g. Crown leases, sale of eggs).
- In-service training for technical and professional personnel.
- Encourage industry and government to provide alternative recreation to fishing activities if demand cannot be managed.
- Combine provincial, commercial and sport responsibilities for inland waters.
- Coordinate management and regulation with other agencies.
- Implement evaluation functions and indicators to all management programs to measure performance in achieving objectives.
- Support tourism marketing schemes which are of benefit to New Brunswickers (outfitters, guides, etc.) over and above needs of residents.

Public and Private Relations - Participation

- Advocate agricultural, forest and other land use practices beneficial to fisheries.

- Promote projects to maintain and improve habitat on private lands.

- Require and assist private landowners and Crown leasees to incorporate and practice fisheries management operating plans into lease agreements.

- Establish cooperative agreements with private landowners and other agencies (e.g. CFB Gagetown) to minimize environmental degradation of aquatic habitat.

- Educate individuals and agencies who have degraded habitat and involve them in mitigation work.

- Manage resources and especially Crown waters to reduce conflicts; determine use priorities (e.g. urban angling; put and take in Iroquois Brook).

- Improve our coordination and cooperation with angler groups.

- Enter into cooperative agreements or provide other incentives to obtain public access to private waters (Big Salmon River lease, Irving lands, etc.).

- Encourage angling for warm water and salt water species.

- Encourage ice angling for warm water species, smelt and burbot.

- Increase and support province-wide educational efforts publicizing the beneficial effects of good land use and water practices.

- Provide management demonstration areas for the public explaining fishery principals, policies and techniques.

- Promote public information; encourage organization of strong angler lobby.

- Promote better relationships between private landowners and anglers.

- Inform and educate public concerning needs and values of fish.

- Encourage ethical behaviour by resource users through education, information, etc.

- Encourage public to appreciate the "non catch" and "no kill" benefits of angling.

- Provide angling education programs for new anglers including angling techniques and fish behavior.

Biological Management

- Employ standardized methods to regularly monitor demand for sport fish recreation (e.g., angler surveys, creel censuses); determine socio-economic values of fish resources and public use and determine the demand for future use.

- Provide a diversity of opportunities for all anglers and other fisheries resource users to pursue their interests in a manner pleasing to themselves, their colleagues and the public.

- Use incentives to effectively redistribute (location and/or time) angling to minimize potential conflicts.

- In areas where demand exceeds supply, attempt to increase carrying capacity, if populations are below carrying capacity levels.

- Establish new populations of game fish (e.g. smallmouth bass) to relieve pressure on overfished waters, especially near urban areas.

- Direct applied research at solving supply limitations or problems and improve survey and monitoring techniques; support university research.

- Emphasize, develop and implement innovative and new-old (forgotten) methods to improve efficiency of management operations.

- Continually evaluate program performance and project objectives; annual and 5-year update of fisheries management plan.

- Prohibit or control exotic fish or fish diseases from introduction.

- Improve and expand fish production programs to meet demand and needs identified in the fisheries management program.

- Implement physical, biological and chemical methods to improve salmonid growth.

- Improve genetic aspects of artificially reared fish; utilization of hybrids.

- Indigenous and exotic (where appropriate) introductions (habitat colonization).

- Population manipulation.

- Maintain unique strains and species.

- Support commercial aquaculture of salmonid (and bait fish?).

- Control of eel and sucker populations.

- Increase populations of endangered non-game reptiles; establish a citizen's advisory committee.

Species Management Plans

- Subobjectives and intended development plans for various New Brunswick game fishes and their use are derived from a "mix" of province-wide strategies to achieve province-wide objectives.

Atlantic Salmon (Sea-Run)

Federal-Provincial coordinated policies, regulations and programs are required if the resource is to provide bountiful harvests for equitable sharing, availability and optimum social and economic returns to the New Brunswick people.

Objectives

1. Increase New Brunswick's current wild Atlantic salmon production from 2.0 million pounds to 3.5 million pounds by 1991; increase hatchery return production from 70,000 pounds to 300,000 pounds by 1991.

2. Prohibit commercial harvesting of salmon; permit commercial harvesting (including native fisheries) of 1.5 million pounds by 1990, if stocks fully recover; future commercial interest to harvest only discrete river stocks.

3. Encourage pen rearing of Atlantic salmon in Bay of Fundy waters - 4.0 million pounds production by 1991.

4. Establishment of a Canadian Atlantic Salmon Commission by 1985 to:

   (a) negotiate and allocate Atlantic salmon sea stocks to various users;

   (b) coordinate policy, planning and budgeting to problem needs on international and inter-provincial waters, in particular;

   (c) provide advice and information to provinces and senior officials; and

   (d) coordinate and monitor regulations, inter-provincial and international management; provide for Federal-Provincial negotiations toward formulating and understanding of an agreement on a coordinated Atlantic salmon program.

5. Public relations and participation program by late 1984 to demonstrate to public and all user groups why and how Atlantic salmon are being managed and who benefits.

6. Increase angling participation, especially on the Miramichi, Saint John and Restigouche drainages to provide 160,000 recreational days Province-wide by 1986; increase angling participation to 300,000 angler days by 1991. Nonresident participation should double by 1990.

Operational Plan

1. Maintain and refine angling allocation controls (for example, leased waters, reserve waters, riparian waters) on rivers subject to angler over-exploitation: Restigouche and Miramichi headwater streams, Tabusintac River and Big Salmon River.

2. Enhance wild production, (via fry or egg plants or fishways) through colonization or restoration, of: S. E. Upsalquitch, South Charlo, S. B. Kedgwick, Middle, Upper, Nepisiguit, Big Tracadie, Bartibog, Tuadook, Tetagouche, S. B. Miramichi, Little, Gaspereau, Salmon, Keswick, Upper Saint John, Petitcodiac, Digdeguash, Canaan and St. Croix Rivers.

3. Increase production of federal and provincial hatchery facilities to 800,000 one-year (19-month) smolts using thermal effluent, photoperiod control (early spawning), oxygen injection systems and water (and heat) recirculation techniques to maximize fingerling growth. Utilize Grand Lake smolts for five-year restoration program on Gaspereau, Salmon, Little, Keswick, Oromocto and Canaan Rivers.

4. Encourage 4,000 non-residents to participate in the Atlantic salmon sport fishery through media advertising and offering quality outfitter accommodations and guides.

5. If commercial fishing cannot be prohibited, trap net exploitation of grilse only on the Restigouche should not exceed 150,000 pounds; Miramichi, 100,000 pounds; and Saint John, 100,000 pounds, until 1985 and thereafter terminated.

6. Charlo and Miramichi hatcheries should be expanded and operated as fry or fingerling facilities to supply enhancement programs in Plan No. 2 above.

7. Pen rearing in Bay of Fundy waters should be further encouraged; extensive applied research at the St. Andrews Biological Station is required to reduce current high economic, technical and biological risks to operators.

Atlantic Salmon (Landlocked)

Landlocked salmon management and enhancement rates highest priority, the species being an angling substitute or alternative for sea-run salmon. We are aware of 21 lakes inhabited by landlocks, but only Chamcook and Magaguadavic Lakes contain self-sustaining populations which support a significant sport fishery.

Objectives

1. Maintain and improve landlock salmon populations in 19 lakes to provide for 10,000 angler days by 1988.

2. Introduce landlocked salmon in 12 lakes by 1985 to produce 40,000 angler days of trophy angling by 1991.

3. Insure brook stock supply to ensure disease-free smolt availability for maintenance and introductory stocking throughout the Province; provide for egg sale to other states and provinces to generate revenues to absorb brood stock program costs.

Operational Plan

1. Establish and maintain landlocked salmon brood stock at the Flowers Cove hatchery to supply 300,000 eggs per annum; maintain sufficient additional brood stock to insure sale of eggs to other agencies sufficient to cover costs of brood stock program.

2. Modify Sucker Brook on Skiff Lake to allow lake to develop a self-sustaining landlock population sufficient to support 2,000 angler days per annum.

3. Maintenance stocking will be undertaken for the following lakes: Utopia, Musquash, Loch Alva, Skiff, Clear, Palfrey, Oromocto and Sisson. Introductory stocking in Mactaquac, Kelly, Unique, Pocologan, Baker, Belleisle, Grand, Serpentine, Trousers and Tetagouche Lakes should be undertaken.

4. Regional biologists will tailor angling regulations to ensure quality sport fishery is established and maintained as required.

5. Introduce forage species (smelt and/or Mysis) in those lakes where forage for landlocked salmon is insufficient or growth is inadequate.

Lake Trout

Lake trout have similar angler appeal and value as landlocked salmon, but offer greater angling benefits due to their greater productivity and relative ease at minimum expense (due to resulting self-sustaining populations) of management. Lake trout inhabit 10 lakes in New Brunswick, but only Chamcook, East Grand, Long, Baker, Third Green and Glazier Lakes support sport fisheries.

Objectives

1. Maintain and improve lake trout populations in four lakes to provide 5,000 angler days by 1988.

2. Introduce lake trout in oligotrophic lakes where self-sustaining populations will establish by 1990 and supply 60,000 angler days by 1995.

3. Insure sufficient disease-free brood stock supply for maintenance and introductory programs throughout the province by 1983; provide disease-free eggs for other states and provinces to absorb brood stock program costs by 1987.

Operational Plan

1. Establish and maintain a disease-free population of lake trout brood stock at the Flowers Cove hatchery to supply 400,000 eggs per annum; maintain sufficient additional brood stock for egg sales to states and provinces.

2. Maintenance stocking of First Green, Serpentine, West Long and Third Green by 1983.

3. Introduce lake trout to Grand, Bellisle, Loch Alva, Mactaquac and Utopia Lakes by 1986 to establish self-sustaining populations by 1991, if possible.

4. Forage species (smelt or Mysis) introduction in lakes (First and Third Green) where growth is only poor to fair, as well as in introductory lakes.

Brook Trout

Competitive species introductions (minnows, perch and pickerel) and angling pressure have decreased or eliminated brook trout populations in waters throughout the province. Even where wild trout populations have excellent habitat conditions in which to live, populations can be virtually eliminated by sport fishing; for example, waters near urban areas. Conversely, many New Brunswick streams often have large populations of small (three- to six-inch) trout which are unattractive to anglers. Tailored regulations, hatchery stocking and habitat improvement are fundamental to restoring, enhancing and rehabilitating the Province's brook trout fisheries. Special restoration emphasis should be placed on western Saint John and Miramichi Lakes and northern estuarial waters.

Objectives

1. Manage self-sustaining wild populations of brook trout to produce 1.1 million days of angling per annum.

2. Provide 200,000 angler days of angling for brook trout of suitable quality and diversity by 1985, including trophy and urban fishing.

3. Tailor regulations to preserve brook trout habitat, angler exploitation and unique stocks (for example, trophy fish).

4. Encourage 30,000 new and potential anglers to fish for warm water species (bass, pickerel, perch) or salt water fishes by 1985.

Operational Plan

1. One hundred and twenty lakes province-wide require maintenance or put-and-take stocking of 100,000 domestic, 150,000 hybrid or 10,000 wild brook trout stocks per annum. The Flowers Cove and thermal plant hatchery facilities can produce sufficient quantities of trout to meet these requirements.

2. Twenty streams in northeastern New Brunswick require fall or winter estuarial stocking with 89,000 hybrid or wild (sea-run) trout to restore brook trout populations and/or provide an economically efficient and quality brook trout fishery.

3. Special regulations (fly fishing only, five-fish limit, catch and release, etc.) are required to protect unique wild stocks around the province: Presque Isle, Pokemouche and Tabusintac Rivers; First,

Second, Sole Leather, Peaked Mountain, Day Brook, Valentine Lakes, etc. Sea-run stocks also require special regulations, especially in the Miramichi region.

4. Stream improvement work, undertaken on many northshore rivers (Tracadie, Burnt Church, Bartibog, etc.) will benefit adult trout and substantially increase their average size and hence, importance to anglers.

5. Anglers under 18 years of age represent 30 percent of the Province's angling population. This age group will be encouraged by special programs to use proper angling techniques, utilize warm water and salt water species, and understand the value of good resource husbandry.

6. Immediate attention will be given to status, utilization and potential of sea-run trout stocks on Miramichi headwater tributaries, Tabusintac, Green Brook (Bartibog) and Gounamitz Rivers. Further study involving genetic propensity of sea-run stocks will be undertaken involving hatchery propogation and electrophonetic work.

7. Lake reclaimation using pesticides, lime or fertilizers will be applied to over 200 smaller lakes in central and southern New Brunswick to reestablish brook trout populations.

8. Population manipulation techniques will be applied to many waters in southern and central New Brunswick to enhance brook trout growth and/or production.

Brown Trout, Rainbow Trout and Arctic Char

Brown trout, rainbow trout and Arctic char are rare and unique species in New Brunswick. Brown trout, introduced to New Brunswick in 1921, have established self-sustaining populations in Mispec, Little, Digdeguash, Black and Meduxnekeag Rivers. The species represents a unique, trophy fishery where it occurs. Rainbow trout were introduced in McFadden Lake (Albert County) in 1890 and Dick's Lake (Kings County) in 1944. Self-sustaining populations occur only in Crooked Creek (Albert County), Dick's Lake and possibly, Presque Isle River. Arctic char may be endemic to Upsalquitch and Walton Lakes, but were introduced into First and Second Portage Lakes in 1950. All populations are self-perpetuating.

Demand for the above species is limited due to angler unawareness of species presence or private waters in which they occur (for example, Dick's Lake and Walton Lake).

Objectives

1. Brown Trout - Manage and promote public utilization of self-sustaining populations, including Loch Lomond Lake; establish new (introductory) populations in "salmonid" inferred lakes by 1987. Establish status as a trophy fishery to encourage angler utilization. Prohibit introduction of brown trout where they may adversely affect native salmonid populations.

2. Rainbow Trout - Management should be by regulation only. Potential competition with sea-run Atlantic salmon and brook trout stocks, as well as poor performance of extensive past introductions negates further consideration until 1985. Species have excellent potential for sea-farming.

3. Arctic Char - Arctic char range should be extended to two additional locations in New Brunswick to insure species survival. Develop hatchery brood stocks for preservation, range extension, and char X brook trout hybrid production.

Operational Plan

1. Encourage angler utilization (trophy) of species in Douglas, Hunter and other Lakes; convince Saint John city officials of trophy benefits of brown trout angling on Loch Lomond Lakes. Introduce brown trout into lakes in the West Musquash drainage area to establish self-sustaining population and subsequent production of 5,000 angler days per annum by 1987. Fifteen thousand brown trout yearlings to be reared at the Flowers Cove/thermal plant facility at Grand Lake.

2. Discourage distribution of rainbow trout throughout the province via current policies and regulations.

3. Introduce Arctic char to Little Kedron Lake (York County) and Popelogan Lake (Restigouche County); maintain habitat quality of char lakes; do not encourage angling, but relate the uniqueness of presence to New Brunswickers. Evaluate char X brook trout hybrid plantings in put, grow, and take angling waters.

Warmwater and Saltwater Species

Warm water species include smallmouth bass, yellow and white perch, chain pickerel, brown bullhead, red breast and pumpkinseed sunfish. Smallmouth bass, the only recognized sport fish, is the Province's third most popular inland sport fish after brook trout and Atlantic salmon. All warmwater game fish species offer huge potential to absorb substantial (200,000 days by 1990) angling effort increases expected in the future, especially by today's juvenile anglers. If some angling can be channeled in this direction, some salmonid demand can be absorbed. Warmwater species have exceptional reproduction potential, ensuring population maintenance without need for hatchery stocking. They offer excellent potential recreational benefits to urban and juvenile-aged anglers.

Objectives

1. Warmwater species angling will be promoted, with saltwater species, to absorb 200,000 additional angling days by 1990, especially for urban and juvenile-aged anglers.

Operational Plan

1. Promote bass and pickerel tournaments in larger lakes in York and Charlotte Counties.

2. Promotional angling material and demonstrations will be undertaken to encourage anglers to fish bass, perch, pickerel, whitefish and burbot species in Charlotte and York County lakes.

3. Establish, in coordination with the New Brunswick Wildlife Federation, valuable angling prizes (awards) for largest warmwater species.

4. The Department of Natural Resources will assist New Brunswick Department of Fisheries in formulation of a promotional angling plan for coastal saltwater species (mackerel, pollock, striped bass, flounder, etc.).

Discussion

Gus Overill: How important is the tourist angler to New Brunswick?

Bill Hooper: We have 7,000 non residents visit the Province of which 4,000 fish salmon. Another 3,000 come for other species and really don't bring in that much money. The 4,000 salmon anglers bring in approximately 4 million dollars. It is very important and those are brand new dollars to our economy. If we had had the salmon populations that we used to have 30 years ago, we could be marketing close to 75 or 100,000 non resident angler days. I think we could actually take that much effort and still our residents would have lots of places to fish as well. We are looking at $100 to $200 million dollar a year industry potential if we just had what we used to have for adult salmon production.

Ed Mankelow: Many governments are industry oriented and not too wildlife oriented and when they are dealing in economics they never take into account the lost economics of the other resources that they destroy. Has your Department given any thought to mitigation where you can go to governments and say if this has to go ahead then a certain amount of money should be put forward into the Department to enhance the fisheries elsewhere and possibly bring back some of these lost runs that you have?

Bill Hooper: New Brunswick contains about 70% crown land, and in the past these lands have been allocated to timber and mining organizations. In the last couple of years we have what we call a Forest Management Act, a land use act, which says to the leasee, that you will do a fish and wildlife management plan. You will, in addition, make sure that you slope your roads accordingly to certain guidelines, undertake habitat improvement where necessary, and things like that. Right now we are just at the bottom of the learning curve and we are finding that the forest management people have no idea what fish and wildlife management is all about. The intent is there but it hasn't been done yet.

Bob Nowchuk: There have been references to the tagging program you have for the Atlantic salmon fishery and I am wondering if you can explain the objectives and benefits of this program and how it fits into your management strategy. A tagging system for chinook has been considered but was discarded because of high cost. I would like to know if the cost of the Atlantic salmon tagging is recoverable and do you have means to gain revenue other than through licences or tags?

Bill Hooper: I haven't been really closely associated with the tagging program but I can send you all that information. Basically our anglers love it and they really believe in it. It is just like motherhood now. Our commercial fishermen who fish from boats and so on, do not like it. They find it a hassle and it takes time to put the tags on and everything else like that. It is being abused because I don't think they make a tag that you can't jimmy.

Our enforcement people like it very much. They haven't had that many prosecutions but the fact is that they have had some. So stacking it all up and the cost of the program, it has been great for New Brunswick. I don't think the administration and the regulations to put this in place were all that time consuming or costly. I don't know how well it would work here but I will send you some stuff on it. A lot of people from Europe and Britain are asking that same question.

Ontario

Ontario Fisheries: Goals and Strategies for the 1980's

Art Holder
Director, Ontario Fisheries Branch

I would preface my address by bringing to your attention that the omission of the word "sport" in the title of this paper is not accidental, but rather purposeful. Goals and strategies for sport fisheries must not be considered as a separate set distinct from those of the management of fisheries as a whole, but rather simply a subset focusing primarily on the difficult, important but second-level concerns of allocation among resource users.

In 1974, a joint Federal-Provincial task force began a long and difficult period of deliberation culminating in April, 1976 in a public policy statement entitled Ontario Fisheries: Management Strategies for the 1980's. This document has provided the basic guidelines for fisheries management direction in Ontario since its publication and hence constitutes the basis for my talk to you today.

Ontario, perhaps more than any other part of Canada, has felt the impacts of a burgeoning population on the aquatic habitat and and fisheries resources within its boundaries. These impacts, while exhibiting themselves in various negative ways, were identified by the Strategic Planning Committee as a series of fundamental issues:

1) Loss of fish and fishing opportunities.
   This needs very little explanation. Fish are neither free nor inexhaustible. Without fish there can be no benefits. Without strategies which reflect the true value of Ontario fisheries and the need for users to pay, the future of the resource and the flow of resultant benefits is certainly threatened.

2) Loss of environmental quality.
   Aquatic systems upon which the fisheries resources are dependent continue to deteriorate under the conflicting demands of other water users. As fisheries agencies we must continue to press for water quality protection and in this regard we should ally ourselves with

those who realize that a healthy aquatic environment suitable for the production of fish is also a healthy and aesthetically pleasing environment for humans.

3) Conflicts among users of the environment and the fisheries resource.
Conflicts inevitably arise among those who wish to partake of the benefits of the aquatic environment. Industrial and domestic wastes, industrial development and construction, natural resource users such as mining and forestry, all compete for fisheries habitat.
Fisheries, as perhaps the most sensitive use of the aquatic habitat, has the most to lose. In addition, competition among users of the fisheries resource - sport fishermen, commercial fishermen, native groups and others - is frequently resolved in a way which threatens future resource availability.

4) Lack of public awareness and involvement.
Failure of public agencies to come to grips satisfactorily with fisheries resources can in part be explained by the lack of public understanding and consensus on the fundamental problems. In the past channels of communication have been inadequate to promote understanding or effective mechanisms for public involvement in decision-making. We can only hope this conference will aid in this regard.

5) Inadequate scientific and technical knowledge.
Despite years of study, aquatic ecosystems remain poorly understood, perhaps because they are among the most complex and difficult systems to study. Great gaps exist in our understanding of the effects of human induced stress on the stability and productivity of our aquatic systems. Also, the understanding of the economic benefits of fisheries resources is entirely inadequate as a basis for the important trade-offs which must be made among existing competing users, as is our knowledge of the social and cultural relationships which often thwart our efforts to manage.

6) Ineffective institutions.
The complexity of constitutional jurisdiction over natural resources and the plethora of agencies involved in fisheries management and environmental protection make institutional arrangements complex and sometimes ineffective. In 1975 in Ontario some 19 federal and 13 provincial agencies had legislation or programs affecting Ontario fisheries. Decision-making has often been handicapped by failure to co-ordinate legislation, policies and planning and by ineffectively co-ordinated program delivery.

Goals and Strategies for the Future

These then are the issues perceived in Ontario. What are the goals and strategies which will permit their resolution? These have been presented and adopted in the Fourth Report of SPOF. The formal goals for fisheries adopted for Ontario are:

1) To protect and maintain healthy aquatic environments and associated fish communities, and to rehabilitate those now degraded, in order to ensure continued supplies of fish and fishing opportunities which in part satisfy society's requirement for

a) wholesome food,

b) employment and income,

c) recreational activity, and

d) high quality of the human environment.

2) To create public awareness of the importance of healthy fish communities and aquatic ecosystems, and to engender a harmonious pattern of uses of fisheries resources and the terrestrial and aquatic ecosystems upon which they depend.

Strategies to reach these goals have been identified and while too numerous and detailed to be reproduced in total in this paper, are available to those who wish to obtain the full report. In summary, they represent four primary elements:

1) Use available knowledge to the full.

1.1 Ensure that management practices in Ontario incorporate desirable strategies as soon as they become available.

1.2 Strengthen inter-agency co-ordination and decision-making mechanisms.

2) Develop knowledge base for effective fisheries management.

2.1 Establish adequate systems for collection, analysis and reporting of relevant fisheries information on a real time basis.

2.2 Develop new fisheries theory and methodology through practical and innovative field and laboratory research in biology, economics and the social sciences.

2.3 Conduct the necessary monitoring and assessment to establish realistic water quality criteria ensuring optimum survival, growth and reproduction of the essential components of aquatic ecosystems.

3) Create an aware public and develop mechanisms for positive and effective public involvement.

3.1 Create and strengthen information services particularly at the local level.

3.2 Develop mechanisms to allow the public freer access to government information.

3.3 Actively provide input to the school system with respect to the values associated with fisheries resources and the ecological, economic and social principles required for rational management.

3.4 Create and institutionalize new communication channels among fishermen, the public at large and fisheries agencies.

3.5 Put emphasis on the development of policy statements which spell out the values and principles which need to be recognized in fisheries management.

4) Adopt a "user pays" principle in line with the value of the fisheries resource and the true cost of effective management.

4.1 Collect a resource rent from recreational and commercial fishing interests, through licence fees, resource royalties or other appropriate mechanisms.

4.2 Given that governments have invested heavily in recreational fishing services and in subsidies and services to the commercial fishing industry, ensure that governments examine and understand the dimensions of demand in relation to the cost of supply.

What I have presented to you here today, while not addressing some of the detailed tactical or program considerations, does, we in Ontario believe, provide a conceptual framework within which more detailed blueprints for fisheries can be drawn, resulting in a structure which will produce the maximum benefits the resource can produce. The task that remains is to determine the optimum distribution of these benefits, a task which Ontario is addressing, but which I have insufficient time to address adequately today.

Discussion

Ralph Shaw: We are facing a major license fee increase, particularly in the salt water. What do anglers in Ontario pay?

Art Holder: We are just going through nonresident increases and are facing unknown response from our neighbours immediately to the south, for example, to a four day licenses which went from $8 to $10 this year. However, we have no resident license. We explain that by saying that, for a fishing family, our general revenues contribute $38 per fishing family. In other words, our program is relatively well funded per fishing family but we have not achieved the level to user pay among the residents that we sought. This is a political decision as it should be. It is not one that the managers agree with but it remains a political decision, a firm political decision. We have increased the nonresident seasonal license from $15 to $30 and we have introduced a number of interim licenses, including a family license at $40 which could pose real difficulties in enforcement.

For the benefit of those living outside of Ontario, I think I would like for the record to let you know that the organized anglers of the province of Ontario have been lobbying the government for years to impose a resident licence. The political decision that has steered Ontario away from a resident license is not the result of the resident anglers: it stems from some other political consideration that I am at a loss to explain.

Roger Liddle: The commercial industry, or the tourist industry, in Ontario has been lobbying very heavily as well for a resident angling licenses. We are at a loss to explain why too.

John Clarke: Without a resident licence-base, you don't know how many angler days per annum each lake is subject to, you don't have much of an idea of your harvest pressure.

Art Holder: We have to do stratified sampling to get some kind of measure. If we want specific information on a specific body of water a creel census is the only method available.

Québec

Situation de la Pêche sportive, Orientations et perspectives de développement au Québec

Claude Bernard
Directeur, Direction de la Faune aquatique,
Ministère du Loisir, de la Chasse et de la Pêche

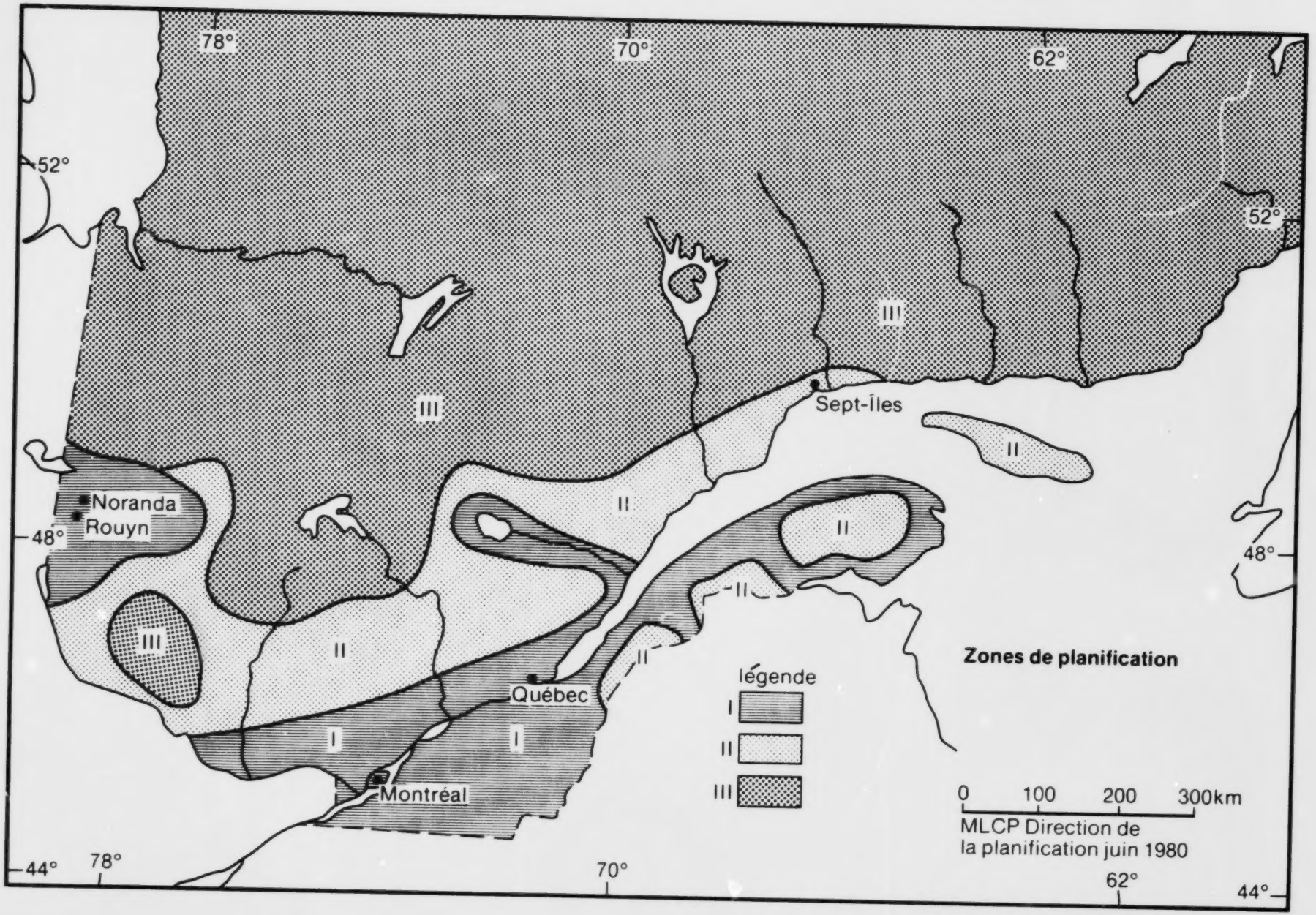
Introduction

Le thème de la Conférence de cette année offre à tous les participants l'occasion de faire un examen de conscience sur les principes qui ont été appliqués jusqu'à maintenant, en matière de pêche sportive. Le Gouvernement du Québec a confié au ministère du Loisir, de la Chasse et de la Pêche (MLCP) la responsabilité de mener à bien la mission faune. C'est à ce titre que nous voulons présenter, dans un premier temps, un bref bilan de la situation en faisant ressortir les principaux problèmes actuels et appréhendés. Dans un deuxième temps, nous préciserons l'orientation que nous entendons privilégier compte tenu tant des aspirations des citoyens que des contraintes biologiques des populations animales concernées ou de leur habitat. C'est donc dans cette section que seront énoncées les idées directrices qui guideront l'élaboration, tantôt de certaines modifications modestes, tantôt de transformations profondes de notre façon de penser et d'agir en matière de gestion de la faune.

Bilan de la situation

À partir des quelques inventaires et des connaissances disponibles sur la faune du Québec et souvent à partir de données empiriques, on a estimé le potentiel d'utilisation des espèces fauniques dites d'intérêt sportif du Québec. Nul besoin de préciser ici à quel point les données de base sont incomplètes et que les estimations obtenues n'ont de valeur que comme indice de l'ordre de grandeur des phénomènes. De plus, on a évalué l'utilisation consommatrice, à partir de différents sondages menés auprès des utilisateurs, en tenant compte de l'existence d'une pêche commerciale en eau douce et de l'exclusivité d'exploitation accordée aux Autochtones sur certains territoires.

On constate qu'il existe au Québec un potentiel faunique capable, en principe, d'absorber un développement de l'utilisation consommatrice de la faune pouvant aller jusqu'au double de la demande actuelle. Il faut cependant admettre du même souffle que ce niveau de confrontation des résultats d'ensemble masque des bilans sectoriels inquiétants. En effet, en zone 1 (fig. 1), par exemple, on observe un net déficit pour les espèces de poissons les plus recherchées tels le brochet, le doré, l'achigan et surtout les salmonidés. Ainsi, on assiste à une récolte qui, selon toute vraisemblance, dépasse dans certains cas le niveau maximum biologiquement acceptable. On observe également


78°
70°
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III
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Sept-Îles
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Noranda
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Québec
légende
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II
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Zones de planification
I
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Montréal
0 100 200 300km
MLCP Direction de
la planification juin 1980
44°
78°
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que les modes actuels de gestion ne permettent pas d'éviter de tels déséquilibres. En zone II (fig. 1), même s'il semble y avoir un certain équilibre entre le potentiel et la récolte du brochet et du doré, l'analyse indique pour les salmonidés un déficit encore plus prononcé qu'en zone 1. Or, si on considère que la zone II renferme la presque totalité des parcs et réserves, des zones d'exploitation contrôlée (ZEC) et des pourvoyeurs où l'exploitation est en général contrôlée, tout porte à croire que le territoire libre adjacent est surexploité, particulièrement en Mauricie et au nord de Montréal.

Les estimations réalisées pour 1980 permettent de situer la demande totale pour la pratique des activités consommatrices à près de 14,5 millions de jours de pêche. D'autre part, une évaluation conservatrice de la participation aux activités d'utilisation non consommatrices de la faune indique que cette demande se situerait autour de 16 millions de jours. La participation massive des Québécois aux activités non consommatrices de la faune constitue un précieux indicateur de l'intérêt que portent les Québécois aux ressources fauniques de la province.

Encadrement législatif et administratif

Le ministère du Loisir, de la Chasse et de la Pêche s'est vu confier par le Législateur le seul rôle de gestionnaire de l'utilisation des ressources fauniques. Ainsi, sa Loi constitutive stipule que les devoirs du Ministère sont de "surveiller et gérer tout ce qui se rapporte à la chasse et à la pêche à l'exception des pêcheries maritimes", de "favoriser le développement du loisir, du sport, de la chasse et de la pêche" et "d'administrer les parcs provinciaux, les réserves de chasse et de pêche et les refuges d'oiseaux." Cependant, dans le cas de l'utilisation de la faune ichtyenne, ses actions sont soumises à l'approbation de l'autorité fédérale.

La structure d'organisation actuelle du ministère du Loisir, de la Chasse et de la Pêche attribue à la Direction générale de la faune la responsabilité des fonctions de planification, de protection, de recherche biologique, d'aménagement et d'exploitation. Du point de vue de l'organisation interne, il s'est engagé depuis une quinzaine d'années dans une certaine régionalisation de ses fonctions. C'est ainsi que dans les années 60, on a assisté à la création de districts et à l'affectation en sous-postes de la fonction de protection. Cette déconcentration s'est accentuée au cours des dernières années avec la création de bureaux régionaux. Les administrations régionales se sont ainsi vues confier plus de responsabilités et un rôle actif dans l'accomplissement de la mission du Ministère. Les régions ont ensuite été subdivisées en entités territoriales plus petites, les zones d'aménagement et de conservation (ZAC), pour assurer une gestion plus appropriée de la ressource faunique et leur donner une dimension plus humaine. Une autre facette de cette évolution du Ministère a été la création des zones d'exploitation contrôlée (ZEC). Il apparaissait important d'impliquer un plus grand nombre de citoyens dans la protection et la répartition de l'utilisation en fonction des possibilités biologiques, cette tâche ne pouvant être assurée uniquement par l'État.

Les besoins de certaines populations animales, la dégradation de la qualité et de la quantité des habitats et l'évolution prévisible de la demande prescrivaient que l'offre faunique devienne un secteur prépondérant dans les interventions du Ministère en matière de la faune.

Dans cette perspective, deux approches pouvaient être envisagées : le support artificiel, d'une part, et le maintien, l'amélioration et la restauration des habitats fauniques. Par rapport à la première alternative, son efficacité à long terme n'était pas démontrée et il apparaissait préférable de n'y recourir qu'en cas d'extrême nécessité. Les interventions sur l'habitat devaient donc être privilégiées.

Dans le contexte actuel, la mise en oeuvre d'une telle option ne se fera pas sans difficulté. En effet, plusieurs organismes se partagent la responsabilité d'intervention sur le territoire, plusieurs intervenants défendent des intérêts divergents et divers types d'utilisateurs de la ressource ont des attentes souvent incompatibles entre elles et avec d'autres utilisateurs d'un même territoire.

Orientations

S'articulant autour de deux objectifs principaux, soit celui de la perpétuation de la faune pour les générations futures et celui de la mise en valeur, la mission faune implique donc que toutes les actions en matière faunique soient le reflet d'une approche écologique à laquelle se greffe les principes inspirés de la social-démocratie.

1 La protection des habitats

À cet égard d'ailleurs, c'est à l'intérieur de la Loi sur la conservation et la mise en valeur de la faune sanctionnée en décembre dernier que le Gouvernement du Québec se donne un nouveau pouvoir en regard de la protection des habitats fauniques. En effet, les prévisions de la Loi autorisent le Ministre à établir des refuges fauniques dans lesquels les conditions d'utilisation des autres ressources sont fixées en vue de conserver l'habitat faunique. Le Ministre s'apprête donc à présenter dans quelques mois une politique beaucoup plus globale sur la conservation des habitats fauniques au Québec.

2 La mise en place du plan de pêche

Les actions du Ministre sur la récolte découlent également des lignes directrices citées plus haut. Ainsi donc, dans la réflexion qui a précédé l'exercice de l'intégration des zones de chasse et de pêche, le Ministère se croit justifié de réduire de façon générale les limites de capture à la pêche sportive permettant ainsi une meilleure redistribution de la récolte soumise à une plus grande pression de pêche. Particulièrement au niveau des espèces d'eau fraîche, le Ministère investit beaucoup de ressources pour définir les approches techniques de gestion qui permettront une meilleure mise en valeur de ces espèces dans un cadre de perpétuation de la ressource.

Bien que les problèmes reliés à la disponibilité de la ressource soient importants, c'est un phénomène social non négligeable au Québec qui prend de plus en plus d'importance, avec l'accroissement des clientèles qui convoitent les ressources de la faune aquatique. En effet, en plus d'une augmentation constante du nombre de pêcheurs sportifs, le Québec a vu un accroissement significatif de la demande pour la pêche commerciale et doit également répondre à des besoins d'alimentation de la part des Autochtones. Soulevant très rapidement le problème de l'allocation des ressources parmi ces divers intervenants, le Gouvernement du Québec a jugé bon d'inscrire dans le cadre de son plan de gestion de la pêche un ordre de priorités à partir de laquelle la répartition de la ressource halieutique est faite dans les eaux sans marée du Québec ainsi que sur les espèces anadromes et catadromes. Ainsi donc, la Loi

sur la conservation et la mise en valeur de la faune adoptée récemment, précise que les besoins des citoyens du Québec seront satisfaits en fonction des priorités suivantes :

1) le stock reproducteur,
2) la pêche à des fins d'alimentation,
3) la pêche sportive,
4) la pêche commerciale.

C'est donc en fonction de cette répartition que seront dorénavant considérées les nouvelles demandes et que sera revue la répartition des stocks actuellement utilisés.

3 La démocratisation de l'accès aux ressources

Beaucoup d'efforts du Gouvernement du Québec ont porté ces dernières années sur la démocratisation de l'accès aux ressources fauniques. On se souviendra de l'Opération gestion faune qui a donné naissance à un réseau de zones d'exploitation contrôlée. Ces jours derniers également le Ministère approuvait une politique dans le but de revoir la vocation et le découpage de ces réserves fauniques. D'une façon plus globale, le Gouvernement du Québec s'est doté ces dernières années d'un réseau permettant de mieux structurer sa récolte et de fournir à l'ensemble des citoyens des chances égales d'avoir accès à cette ressource faunique.

Toutefois, la mise en place de tels réseaux ne veut pas nécessairement dire que des principes économiques sont négligés pour autant. Ainsi donc, à l'intérieur de ces différents réseaux permettant un meilleur accès, le Gouvernement du Québec tente de maintenir un juste équilibre entre le coût des services qui sont offerts aux usagers, coût que ces derniers doivent débourser pour y avoir accès.

Au niveau du réseau des pourvoyeurs, c'est l'application des principes de rentabilité qui sont privilégiés et le propriétaire de bail opère sa pourvoirie en recherchant un profit tout comme n'importe quelle entreprise commerciale du Québec.

Pour le réseau des réserves fauniques, c'est plutôt l'aspect social qui prime. On cherchera donc à concilier les contraintes reliées à la récupération des coûts avec le rôle social dévolu à ces territoires. Il y aura donc une répartition des coûts de façon équitable entre tous les types d'utilisateurs.

Enfin dans le troisième grand réseau d'accessibilité à la ressource, celui des zones d'exploitation contrôlée, les associations responsables de la gestion de ces zones doivent faire en sorte que les coûts d'opérations soient couverts par les revenus autonomes et qu'elles ne peuvent compter sur des subventions gouvernementales que pour des immobilisations.

4 La délégation de gestion

Dans les réserves fauniques, la délégation n'est possible que pour assurer la présentation de certaines activités ou services. Au niveau des zones d'exploitation contrôlée, cette délégation est beaucoup plus importante. En plus de confier toute la responsabilité administrative de ces zones, le Ministère accepte que certaines responsabilités de gestion faunique soient réalisées par les gestionnaires de la ZEC, par exemple : le suivi de

l'exploitation, l'amélioration physique des habitats et la mise en application de la réglementation. Au niveau de réseau de pourvoiries, ces mêmes possibilités de délégation existent.

Perspectives de développement

1 Utilisation non consommatrice de la faune

À partir de ces divers éléments, quelle est pour nous la perspective la plus réaliste que l'on puisse imaginer pour la pêche sportive dans les années 1990? Tout d'abord, disons que l'approche écologique qui est favorisée par le ministère du Loisir, de la Chasse et de la Pêche sera maintenue tant et aussi longtemps que les valeurs de la société feront en sorte que la faune sera considérée comme partie du patrimoine québécois. Qui plus est, si on se fie aux tendances exprimées par différents organismes, il est prévisible que des pressions sociales soient exercées sur le Gouvernement du Québec pour l'amener à modifier sa réglementation visant à donner une plus large place à l'utilisation non consommatrice de la faune. Toutefois, en matière aquatique, cette perspective se situe à plus long terme.

2 Développement en périphérie urbaine

Compte tenu des coûts associés à la pratique de la pêche, cette activité se déroulera plutôt dans les milieux urbains et périurbains. Les Québécois utiliseront davantage les plans d'eau éloignés pour faire des voyages de pêche dont le séjour sera long, alors qu'ils satisferont leurs besoins en pêche quotidienne dans des endroits très près de leur résidence.

Ces modifications dans les habitudes amèneront les différents réseaux, entre autres, les réserves et les zones d'exploitation contrôlée, à modifier leur infrastructure pour tenter de satisfaire les nouveaux besoins de leurs clientèles. Quant au réseau de la pourvoirie qui, par définition, a une vocation d'hébergement, c'est plutôt en terme de consolidation et de développement qu'il s'orientera.

Dans les régions urbaines et périurbaines, le Ministère rendra disponible le potentiel faunique immense que constitue le couloir fluvial et ses principaux affluents pour fournir à la population de ces régions plus d'accès et d'en faire connaître ses richesses. À ce titre, le Ministère met la dernière main à un projet d'envergure qui est celui de Projet Archipel [1], où tous les efforts ont été consacrés pour faire la meilleure synthèse possible des besoins sociaux en matière de loisirs, de pêche et d'utilisation non consommatrice de la faune dans le couloir fluvial de la région de Montréal.

De plus, en vertu des nouvelles dispositions de la Loi sur la conservation et la mise en valeur de la faune, le Ministère reprend le contrôle des étangs de pêche. Des analyses seront faites pour voir s'il n'est pas possible de modifier et d'améliorer les services offerts à l'ensemble de la clientèle et faire en sorte que pour des endroits où l'offre de pêche est réduite, que ce réseau puisse s'avérer une formule de pêche intéressante. Enfin, toujours dans le

[1] Projet de mise en valeur d'un secteur du fleuve Saint-Laurent situé dans la région de Montréal.

couloir fluvial, mais se rapportant plus aux expèces anadromes et catadromes, mentionnons que l'application de l'allocation décidée selon la Loi sur la conservation et la mise en valeur de la faune amènera à moyen terme un nouveau partage de la ressource.

En guise de conclusion, nous sommes très confiants dans les perspectives de la pêche sportive des années 90 au Québec. Les récentes décisions prises par le Gouvernement du Québec en matière de conservation et de mise en valeur de la ressource indique de façon non équivoque la priorité que le Québec veut donner à la pêche sportive. Il est également clair que le Québec désire maximiser les retombées économiques que la pêche sportive génère pour l'ensemble des Québécois. Une telle approche se fera dans le respect de la faune et des droits des Autochtones de subvenir à leurs besoins alimentarires à partir de celle-ci.

Discussion

Wilf Carter: You made reference to the native peoples' fishery and my question is on that subject. There has been an expectance on the part of other user groups to face restrictions in the salmon fishery beginning in 1984, and my question is to ask you whether your Department has initiated any discussions with the Federal Government, or vice versa whether the Federal Government has taken the initiative, to make sure that the native bands that exploit the salmon harvest are involved in the restrictions and cutbacks that are going to take place? If we end up in a situation where all commercial fishermen and anglers are making sacrifices in their harvest, and there is no participation in that program with the native bands, I think we are going to find that much of the objective of this whole exercise is going to be frustrated. I want to make sure that somebody is taking the initiative, either in Quebec or the Federal Government, to involve the native people in this conservation exercise that we are starting.

Claude Bernard: Effectivement, je pense qu'au Québec il faut impliquer tous les niveaux d'exploitants que ce soit par la pêche sportive, la pêche commerciale, la pêche par les Autochtones, ou la pêche pour fins d'alimentation. Si on fait un effort, seulement dans un sens, les résultats ne seront probablement pas atteints aussi rapidement qu'on le désirerait. Dans les prochaines semaines, le Ministère prévoit des rencontres avec les Autochtones pour revoir les quotas qui leur ont été pratiquement garantis dans le passé afin de les sensibiliser à la situation, particulièrement en ce qui concerne le saumon. Je pense que cette observation s'applique particulièrement dans le cas du saumon. J'estime que les Autochtones devraient être capables de comprendre la situation et d'admettre que le partage qui se fait doit également impliquer les Autochtones. On est sensibilisé à ce fait-là et il faut que les rencontres se réalisent au plus tôt en vue de discuter, et d'impliquer les Autochtones.

Tim Surette: Je voulais tout simplement m'assurer que soit le Gouvernement du Québec ou le Fédéral sache que les initiatives débuteront pour assurer qu'il y ait implication des Autochtones dans le programme qui va débuter en 1984 pour la restructuration de la pêche au saumon.

Claude Bernard: Le Ministère n'a pas encore pris de décisions à ce qui sera appliqué en 1984. On est actuellement en train d'examiner des propositions et d'ici 2 semaines on devrait être fixé sur ce qu'on devrait recommander mais ces recommandations-là sont inspirées également de ce qui a été discuté à des

rencontres comme CSCPCA (Comité scientifique consultatif des pêches du Canada dans l'Atlantique), le comité consultatif sur le saumon. C'est à partir de ce moment-là que nous recontrerons les Autochtones ou les conseils comme le CAM (Conseil Atikamek-Montagnais) afin de les sensibiliser. Tous les Québécois, les habitants de l'est du Canada sont conscients du problème du saumon - donc, déjà il y a une information qui est donnée depuis quelque temps sur cet aspect.

Tim Surette: Notre Ministre, l'honorable Pierre de Bané détaillait sur les problèmes des pluies acides hier soir dans son discours, et comme je le comprends c'est un grand problème pour le Québec. Je voudrais donc savoir si le Gouvernement du Québec est actif dans ce domaine de recherche?

Claude Bernard: Le problème des précipitations acides est une des préoccupations du Gouvernement du Québec. On est impliqué par l'entremise du ministère de l'Environment et du MLCP. Chez nous au Québec on effectue surtout des études en collaboration avec des consultants, le ministère des Pêches et des Océans, IRNS-Eau et l'Université Laval sur différents aspects du problème des précipitations acides, et plus particulièrement ses répercussions sur la faune et la faune aquatique. Quant à l'aspect des effets ou conséquences des pluies acides sur le saumon on n'a pas encore au Québec de preuves tangibles de leurs effets néfastes. Cependant dans certaines rivières, on constate que le déclin des populations est probablement dû en partie au cours des dernières années et aux précipitations acides. Dernièrement, l'Institut d'océanographie de Woods Hole a établi une station de recherche sur la rivière Matamec, a tenu un colloque à Québec et a communiqué des données sur les précipitations acides et sur leurs effets. Actuellement selon ces données on ne peut conclure qu'il y aurait un effet sur les populations de saumon comme, par exemple, sur l'omble de fontaine (truite mouchetée). Assurément c'est une source d'inquiétude. Nous avons prévu des programmes pour le prochain exercice financier afin de poursuivre et d'entreprende de nouveaux projets.

John Clarke: Regarding the Indian people, is it not a fact that they have a right at law as individuals to harvest the fish by whatsoever means for food and that this is an individual right and that if there was going to be any control over them it would have to be a matter of consensus between the various individuals because they have this federally granted right to harvest.

Claude Bernard: Je crois que ce qui a été accordé dans le passé aux Autochtones a été décidé au niveau politique d'abord. En dehors de cette considération, il est absolument essentiel, à mon avis, que tous les utilisateurs de la faune soient sensibilisés aux problèmes particuliers du saumon. Même si on reconnaît les droits des Autochtones, il n'y aura plus de droits si la ressource disparaît. Je pense aussi qu'il faut sensibiliser tous les utilisateurs à la situation telle qu'on la connaît; ça ne veut pas dire que les Autochtones ne pourront pas participer à une exploitation éventuelle mais il faut que l'on attribue les quotas aux différents groupes d'utilisateurs.

Manitoba

A Proposed Sport Fisheries Strategy for Manitoba

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This document is for discussion purposes only. Although many aspects represent existing policy, this proposed strategy does not have the approval of the Departmental Executive and is subject to review and revision by government and users.

Introduction

Sport fishermen are a major user of fish resources in Manitoba. In 1980 an estimated 280,000 anglers (of which 200,000 are licenced anglers and 80,000 are age 16 and under or age 65 and over who do not need a licence) fished 4.1 million days and caught 14 million fish. Sport fishing is an important economic activity in the Province. Total expenditures on sport fishing during 1980 was estimated at over $95 million. This represents about $45 million in terms of value added or income generated in the Province by this activity. The 200,000 sport fishing licences sold annually generate revenues of about $1.4 million based on the present fee structure. This is roughly equivalent to Fisheries Branch expenditures on sport fisheries management and stocking programs.

The Manitoba Fishery Strategy was first implemented in 1981 and since that time has guided fisheries management in the Province. Three broad program areas are recognized, these are: sport fisheries, commercial fisheries and resource enhancement. This document represents a first attempt to assemble an overall sport fisheries strategy for Manitoba. Similar initiatives are being taken in the two other program areas.

The first section presents background information and a review of sport fisheries status and trends. The subsequent strategy sections deal with provincial resource allocation priorities and management principles, sport fisheries issues and objectives and finally policies and programs.

Background

For management and allocation purposes sport anglers are considered in two categories, recreational anglers and commercial anglers. Recreational anglers, which represent about 80 percent of total anglers, are residents of Manitoba and a small number of Canadian residents from other provinces who are entitled to purchase resident angling licences. Commercial anglers include those staying at commercial facilities such as tourist lodges and all non-resident (of Canada) anglers. Recreational anglers are entitled to fish all waters in the Province during open season. Allocation of fish resources to commercial anglers is based on economic criteria, that is, according to the contribution they make to the provincial economy.

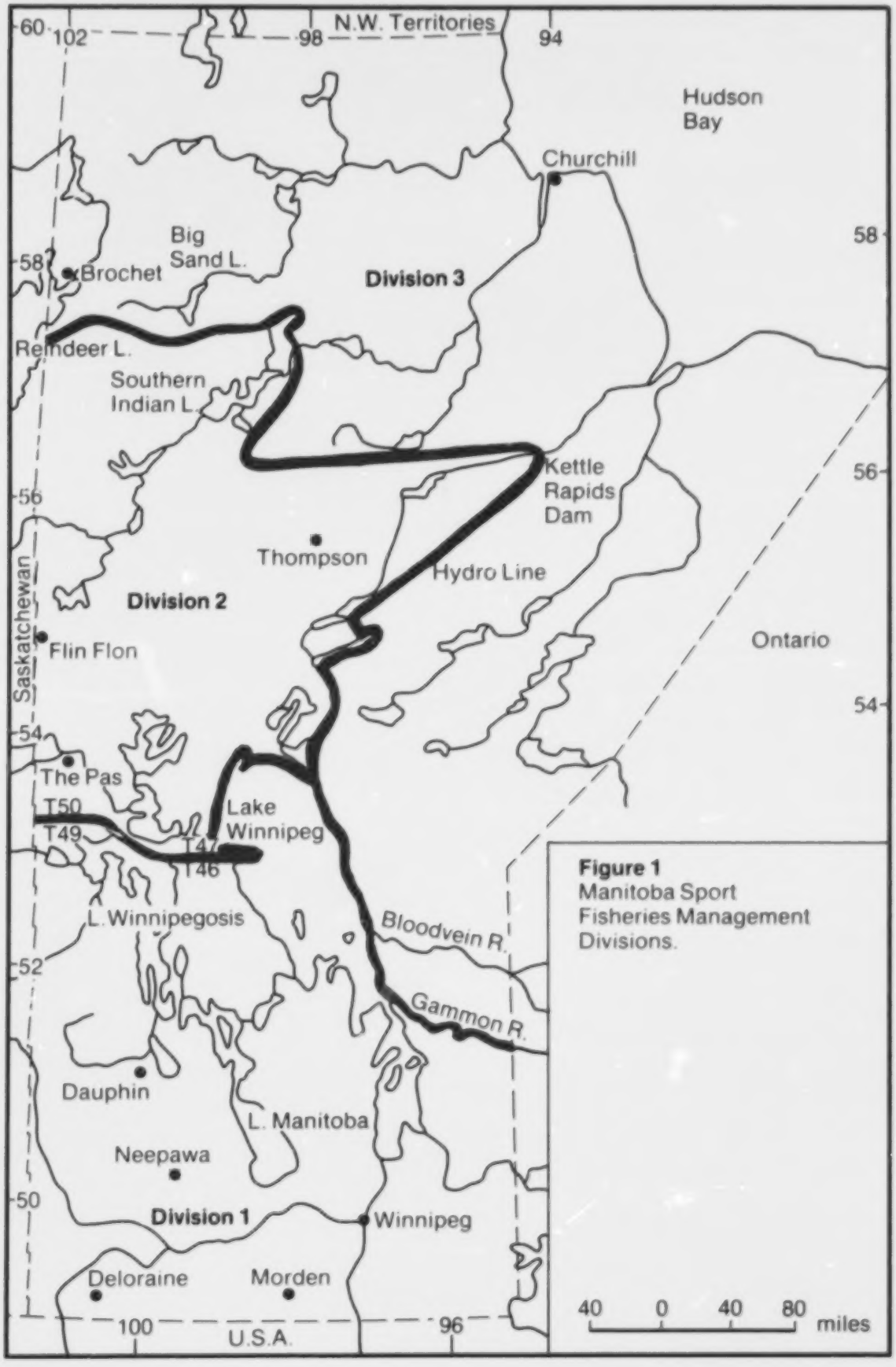

Figure 1
Manitoba Sport Fisheries Management Divisions.

Further discussions of the sport fishing industry will be done in two parts. The first section will consider the present status and trends of sport fishing as a whole in terms of licence sales, effort, catch and harvest and expenditure on a provincial and regional basis. The last section will deal with the fishing lodge industry in the Province.

The three sport fisheries management divisions in the Province will serve as the basis for regional comparisons (Figure 1). Division 1 represents the southern part of the Province, Division 2 the road accessible north including such population centres as The Pas, Thompson, Flin Flon and Lynn Lake, and Division 3 the remote north.

Sport Fisheries Status and Trends

The following discussion of existing status and trends in the sport fisheries is based primarily on two sources of data which are, annual licence sales and surveys conducted in 1975 and 1980.

In general the data indicate increasing participation and use of the resource and a corresponding increase in harvest and expenditures.

The trend in sport fishing licence sales during the 10-year period 1973-82 is illustrated in Table 1. Total licence sales have increased at about 2% per year from 160,000 in 1973 to around 200,000 in the early 1980's. Resident licence sales have increased steadily from 130,000 in 1973 to 164,000 in 1982. Non-resident licence sales increased from 30,000 to 40,000 between 1973 and 1976 then remained fairly constant at this level through 1981, then dropped substantially to 32,000 in 1982. This drop in 1982 was due, in part, to a substantial increase in non-resident licence fees. However, the deteriorating economy resulting in a general decline in tourism is believed to be the most significant factor. Both Ontario and Saskatchewan experienced a decline in non-resident licence sales in 1982. It is interesting to note that despite a licence fee increase, resident licences increased significantly by about 5,000. It appears that with the downturn in the economy, significantly greater numbers of Manitobans took up sport fishing in their own province.

The effort expended in the pursuit of sport fishing is measured in angler days. The 1975 survey indicated that approximately 2.5 million angler days were spent by licenced fishermen in Manitoba (Table 2). Total effort was about 3.5 million angler days for all participants. In 1980, there was an increase in total effort of 16% by licenced anglers to approximately 2.9 million angler days (Table 2). Total effort by all participants increased to about 4.2 million angler days.

Table 1. Sport fishing licence sales in Manitoba during the 10-year period, 1973 - 1982.

Year	Resident	Non-Resident*	Total
1973	127 440	34 008	161 528
1974	137 492	31 726	169 218
1975	142 226	35 858	178 084
1976	150 027	39 310	189 337
1977	148 289	37 538	185 827
1978	156 553	40 847	197 400
1979	155 790	40 619	196 409
1980	159 584	41 011	200 595
1981	159 233	40 474	199 707
1982	164 383	32 272	196 655

* Includes both seasonal and 3-day licences.

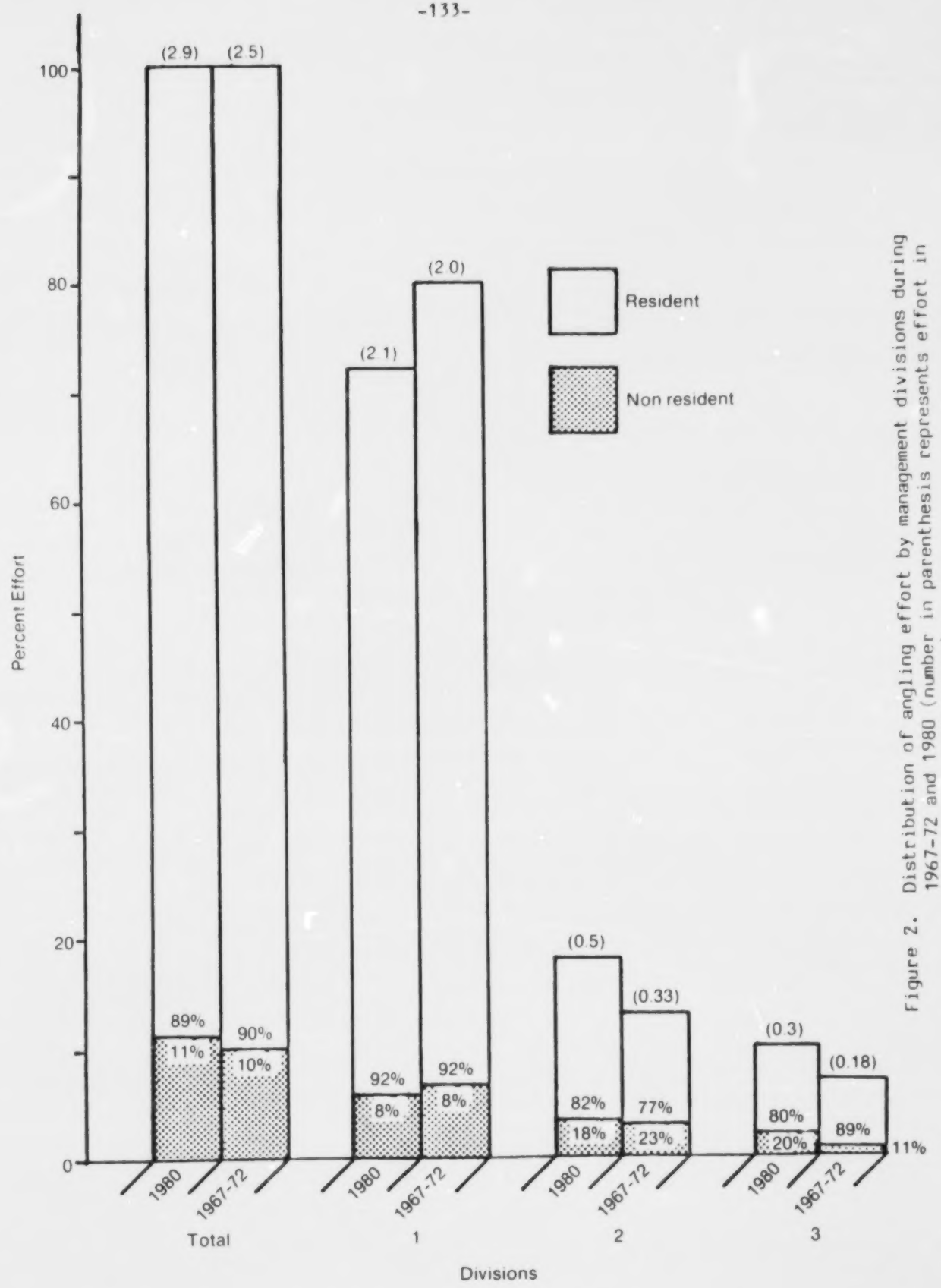

Figure 2. Distribution of angling effort by management divisions during 1967-72 and 1980 (number in parenthesis represents effort in millions of angler days).

A breakdown of relative angling effort for the three management divisions is presented in Figure 2. Over 2 million angler days or 72% of the total effort was expended in Division 1 (Agro-Manitoba). This represents 74% of the total resident angling effort and 52% of the total non-resident angling effort in the Province.

The relative distribution of angling effort by management division is not available for 1975. However, some perspective on regional effort trends can be obtained by comparing licence questionnaire returns for 1967-72 with the results of the 1980 survey. The data indicate a relative decline in effort in Division 1 and a corresponding increase in effort in Division 2 and 3 (Figure 2). This trend is in part a reflection of road and community development in northern Manitoba resulting in greater access to fishing resources. A comparison of resident and non-resident effort reveals that the proportion remained unchanged in Division 1 but that the proportion of non-resident effort increased significantly in Division 3. While the increase in Division 2 can be partly attributed to road development and the tendency for drive-in non-resident anglers to fish the new hotspot at road's end, the trend in the remote north (Division 3) is largely due to the development and expansion of the lodge industry during this period.

A comparison of the total number of fish caught and kept for 1975 and 1980 (Table 2), reveals that the number of fish caught increased from 8.1 million to 10.0 million, or by 23%. Walleye and pike are the most popular species representing 60 - 70% of the catch (Table 3). As previously noted, effort increased approximately 16%.

Table 2. Comparison of effort, catch and expenditures by resident and non-resident sport fishermen during 1975 and 1980.

	1975			1980		
	Resident	Non-Res.	Total	Resident	Non-Res.	Total
Effort						
Angler days	2 132 000	368 000	2 500 000	2 575 000	315 000	2 890 000
Total Fish						
Number Caught	5 767 000	377 000	8 144 000	7 701 000	2 301 000	10 002 000
Number Kept	3 571 000	890 000	4 641 000	4 016 000	771 000	4 787 000
Total Expenditures						
Dollars, millions	22.3	9.7	32.0	77.7	18.2	95.9

The number of fish kept increased only slightly from 4.5 to 4.8 million which represents a significant increase in the number of fish released. In 1975, 45% of fish caught were released. In 1980, the number of fish released increased to 52% of those caught. A species breakdown of fish caught and released for the two periods (Table 3), reveals that the trend is a general one that applies to all species. The Master Angler program administered by the Department of Business Development and Tourism initiated an award program in 1980 for trophy fish which were caught and released. The number of trophy fish released has gradually increased over the past three years (Table 4a). Manitoba anglers appear to release a larger portion of their catch than their counterparts in Ontario (Table 4b).

Regional patterns in fish caught and released are presented in Figure 3. Only 47% of fish caught in Division 1 are released while 57% and 67% of fish caught are released in Divisions 2 and 3 respectively. This is not only a

Table 3. Species composition of catch (relative percentage) and percentage of fish of each species which were caught and released.

	1975		1980	
	Percent of catch	Percent released	Percent of catch	Percent released
Walleye	34	37	33	41
Pike	32	55	39	62
Lake Trout	2	39	3	61
Smallmouth Bass	2	32	2	76
Rainbow Trout	1	26	1	47
Brook Trout	1	23	1	46
Other	28	47	21	49
Total	100	45	100	52

Table 4a. Percentage of trophy fish released based on Master Angler Awards program. Total number of trophy fish caught in parenthesis.

	1980	1981	1982
Pike	20 (567)	25 (591)	45 (550)
Walleye	4 (445)	10 (481)	10 (374)
Lake Trout	54 (238)	53 (309)	58 (328)

Table 4b. Comparison of percentage of fish released in Ontario and Manitoba according to 1980 survey of sport fishing in Canada.

	Manitoba		Ontario	
	Resident	Non-Resident	Resident	Non-Resident
Pike	56	68	52	65
Walleye	26	55	22	44
Lake Trout	56	71	14	31
All species	44	61	32	44
Average of all fish released	52		35	

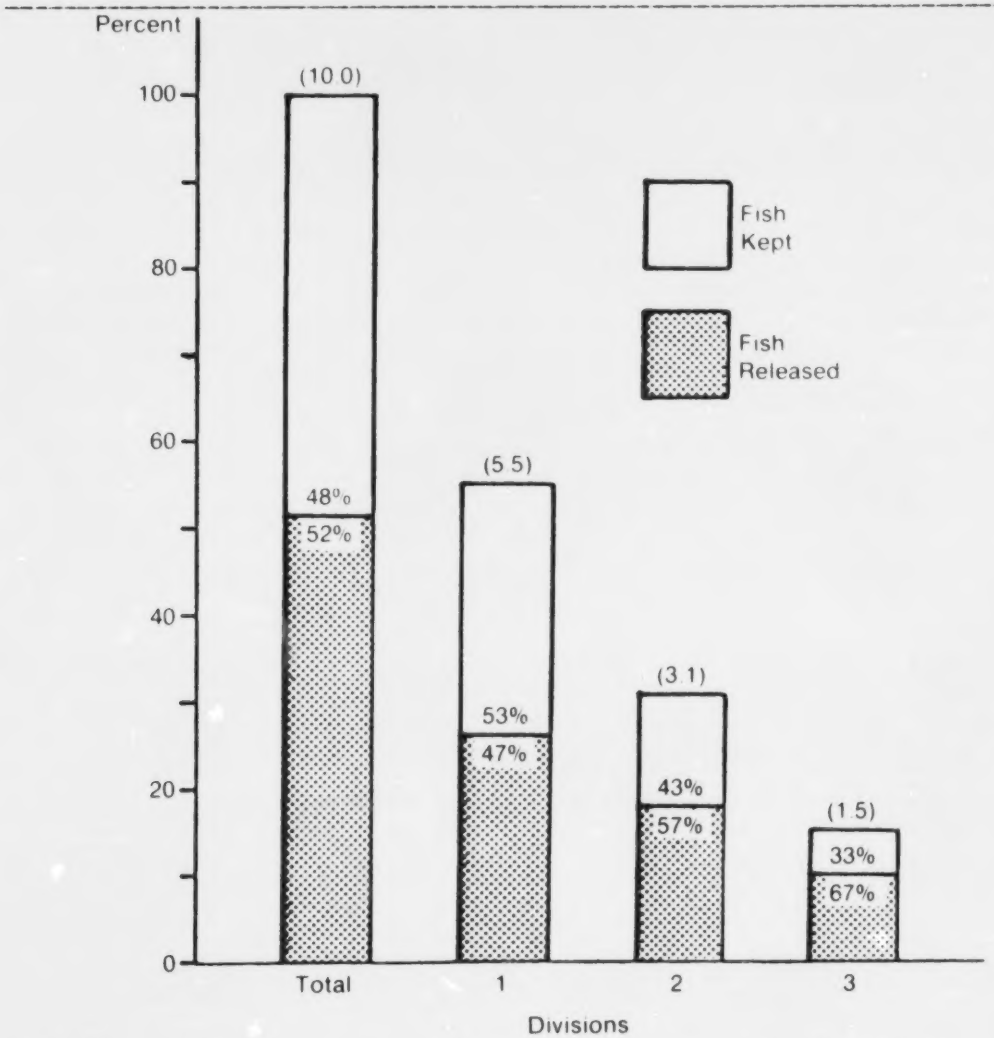

Figure 3. Distribution of total fish caught, kept and released by management divisions during 1980 (number in parenthesis represents total fish caught).

reflection of better fishing in the north but also the adoption of high quality (reduced limit) management regulations and one trophy only policies by many lodge operators in Divisions 2 and 3.

In general, the trend towards catch and release fishing reflects the establishment of a growing awareness by anglers that the resource base is limited. Over this time period Fisheries Branch has been active with programs that promote the use of barbless hooks and programs that encourage anglers to limit their kill.

From the foregoing it is evident that the vast majority of angler effort continues to be expended in Division 1. Also the bulk of the fish are harvested here. A first order comparison of angling quality can be made by comparing the number of fish caught per angling day in the three management divisions. Anglers averaged 2.6 fish per day in Division 1 versus 6.2 in Division 2 and 5.0 in Division 3. To put these catch rates in perspective, past angler questionnaires indicate that perceptions of angling quality are a function of angling experience, however, the minimum expectation appears to be around 2 - 3 fish per angler day. For a common pike-walleye fishery anglers lose interest when catch rates drop below 0.2 - 0.3 fish per angler hour. Some lakes including many intensively fished lakes in Whiteshell Park fall into this category at present.

Division 1 is the area in which habitat degradation and loss is most prevalent, therefore factors of decreasing supply and increasing or continued high demand and corresponding changes in the quality and quantity of sport fishing opportunities are of primary management concern.

The sport fisheries of Manitoba generate a significant amount of money for the provincial economy. Total expenditure by anglers increased from $68.2 million in 1975 to $95.9 million in 1980 (Table 2). Non-resident expenditures increased by 58% versus 37% for residents. In terms of resident expenditures, the increase for capital items was significantly higher (49%) than for direct expenditures (18%). These trends reflect a general increase in the amount of leisure time and disposable income available, the emergence of the more knowledgeable, better equipped high technology angler who is willing to spend more money on sport fishing, and the rapid development of the lodge industry in the province.

Future Trends

Trend analysis for the period 1975-80 indicates that the number of anglers who participate in the sport is increasing (10% in terms of licensed anglers during this period), that anglers are spending more time (16% increase in effort) and money (40% increase in expenditures) on the sport. Anglers are catching more fish (20%), i.e. they are better fishermen, but they are releasing a greater portion of their catch and total harvest has increased only slightly (6%).

Projections of licence sales, effort, catch and expenditures based on the above trend are provided in Table 5. In view of the declining economy over the past several years the projections for 1985 may be somewhat optimistic, however, resident angling activity does not seem overly sensitive to economic factors and the tourist market should recover quickly when the economy improves.

Little if any excess resource base exists in Division 1 and under the most optimistic scenario, enhancement efforts, including habitat rehabilitation and stocking, will offset resource loss due to habitat loss and deterioration.

The relatively high quality of angling in Division 2 and 3 as evidenced by catch rates is not an indication that angling quality can be compromised. High quality angling along with some trophy fishing is essential if the road accessible north (Division 2) is to maintain and enhance its status as a tourist destination. This area has some highly productive fisheries such as the

Table 5. Projection of licence sales and effort, catch and expenditures for licenced anglers based on 1975-80 trends.

	1980	1985	1990
Licenced anglers	200 000	221 000	243 000
Effort (man days)	2 900 000	3 400 000	3 900 000
Catch			
Number caught	10 000 000	12 000 000	14 400 000
Number kept	4 900 000	5 200 000	5 500 000
Total Expenditures	$96 000 000	$134 000 000	$188 000 000

Saskatchewan River Delta area and there is some potential for development of commercial sport fishing on remote lakes. Road building activities associated with forestry and mining operations are likely to result in some additional drive-in angling opportunities. However, in spite of the fact that anglers in Division 2 release 57% of their catch, they are presently the most consumptive anglers in the Province keeping 2.7 fish per day versus 1.6 fish per day in Division 3 and 1.4 fish per day in Division 1.

Management objectives are different for the three divisions - the maintenance of a base level of angling opportunities in Division 1, high quality and some trophy fishing in Division 2 in a mixture of drive-in and fly-in fisheries and a high quality wilderness and trophy fishery in Division 3 - however, the management means are similar and involve the promotion of less consumptive angling through public education and regulation. It is recognized that catch and release fishing is an imperfect instrument and results in some mortality and that changes in angling gear and methods may be required in the future.

The survival and future success of the high priced lodge fishery in Division 3 is dependent on two critical factors, the ability to provide a wilderness experience and the availability of trophy fish. Towards this end government has developed guidelines and policies designed to gear lodge development to resource capacity and maintain the wilderness characteristic of designated lodge lakes. The lodge industry has responded by voluntarily applying one trophy and reduced limit policies to many lodge and outcamp lakes.

LODGE INDUSTRY

Status and Trends

Presently there are 106 licenced lodges (Table 6), 85 outcamps and over 160 boat caches engaged in commercial sport fishing activity in Manitoba. In 1979 the lodge industry generated gross revenues of $8.1 million and employed a total of 731 people. Preliminary results from a comprehensive lodge survey conducted in 1983 indicate that during 1981 the lodge industry realized approximately 285,000 guest days generating gross revenues of $11.3 million and employing 823 people.

The majority of lodges operating in Division 1 and 2 are road accessible, although several lodges located in the northern part of Division 2 offer a remote fishing experience and are only accessible by plane. All lodges in Division 3 are considered remote and can be reached only by plane. As shown in Table 2, the greatest percentage (74) of lodges occur in the road accessible regions of Manitoba. The largest concentration of road accessible lodges, representing 34% of the industry, are located in the Whiteshell/Nopiming parks. The majority of Manitoba's remote lodges (64%) are situated to the east and northeast of Lake Winnipeg. Most lodges (90%) operating in Manitoba are owned by Manitoba residents, while the remaining eight percent and two percent are owned by Americans and other Canadians respectively (Table 6).

Remote lodges operating in Division 3 hire a greater number of paid employees per lodge (12.5) compared to the road accessible lodges of Divisions 1 and 2 (2.8) and accounted for 65% of the industry payroll. Lodge owners in Divisions 1 and 2 rely more on family members as employees, than Division 3 lodge owners do (Table 7). In addition lodges in Division 3 hire a considerably greater percentage of full time employees.

Lodges in Division 3 generated about 45% of the gross industry revenue. Remote establishments in Division 2 and 3 realized more revenue per lodge ($148,000) than road accessible lodges ($55,000).

An estimated 29% (9,700) of the 32,000 non-resident anglers who purchased seasonal angling licences during 1980 stayed at a lodge or fishing camp while 31% (10,000) stayed in a tent or trailer. Lodge anglers spent an average of $872 in Manitoba versus $373 for campers. Expenditure trends are similar for three-day non-resident licence holders who camped ($324) versus those who stayed at lodges and fishing camps ($493).

Table 6. Manitoba's lodge industry summary for 1983. Employment and financial data for 1979.

	Total Industry
Number of establishments	106
Number of beds*[1]	3 958
Accessibility:	
road/rail/boat	78
air	28
Ownership:	
Manitoba	95
Other Canadian	2
U.S.	9
Employees*[2]	
(Including owner and family)	731
Paid employees	529
Full time	289
Part time	240
Salaries	$1 326 600
Revenue	$8 075 000

[1]Includes outcamp beds.
[2]Low estimate - no data for lodges on the east side of Lake Winnipeg.

To evaluate how the lodge industry has changed in northern Manitoba (Divisions 2 and 3), data collected from 1973 (Table 8) and 1979-1983 (Tables 6 and 7) lodge surveys, were compared. Over the past 10 years, there has been an increase of eight remote lodges and associated outcamps in Division 3 resulting in 348 additional beds. Division 2 has remained relatively stable, supporting 32 lodges over this period. The number of paid employees has decreased from 464 to 392, the ratio of full time to part time employees has increased significantly. Salaries and revenues have increased by six and four times respectively over this 10-year period.

Fisheries management practices and policies with respect to the lodge industry have changed considerably over the past five to 10 years. Government has been applying lake capacity guidelines for commercial sport fisheries development in an attempt to gear the level of development and investment to the size and value of the resource. Lodge operators are given some security of access to the resource but are expected to meet performance standards in terms of occupancy, employment and local benefits. Department cottaging guidelines restrict remote cottaging development to lakes on which the resource base is too small for commercial development - lakes of 200 ha. and 600 ha. in size in the eastern and northern regions of Manitoba respectively - or lakes that have limited potential for commercial development. However the process works both ways and commercial development is not allowed on remote lakes below the specified minimum size.

Manitoba lodge operators have been leaders in resource conservation programs. They recognized the fragile nature of the trophy resource base in the north and the fact that their investment was not very portable and have voluntarily applied one trophy only and reduced limit restrictions. The past several years has seen the implementation of a one trophy only regulation for

Table 7. Divisional summary of Manitoba's lodge industry for 1983. Employment and financial data for 1979.

	Division 1	Division 2	Division 3
Number of establishments	50	32	24
Number of beds*[1]	2 053	1 071	834
Accessibility:			
road/rail/boat	50	28	0
air	--	4	24
Ownership:			
Manitoba	50	25	20
Other Canadian	0	1	1
U.S.	--	6	3
Employees*[2]			
(Including owner and family)	243	151	337
Paid employees	137	90	302
Full time	43	42	204
Part time	94	48	98
Salaries	$273 200	$188 800	$854 600
Revenue	$2 995 400	$1 529 600	$3 550 000
Average revenue/lodge	$59 908	$47 800	$147 917

[1]Includes outcamp beds.
[2]Low estimate - no data for lodges on the east side of Lake Winnipeg.

Table 8. Manitoba's northern lodge industry summary for 1973 and 1983. (Divisions 2 and 3).

	1973	1983[1]
Number of establishments	48	56
Number of beds	1 574	1 905
Occupancy	43%	--
Accessibility:		
road/rail/boat	28	28
air	20	28
Ownership:		
Manitoba	45	45
Other Canadian	0	2
U.S.	3	9
Employees (Including owners)	518	488[3]
Paid employees	464	392
Full time	180	246
Part time	284	146
Salaries	$181 521	$1 043 400
Revenue	$1 301 975	$5 079 600

[1]Employment and financial data for 1979.
[2]Includes outcamp beds.
[3]Low estimate - no data for lodges on east side of Lake Winnipeg

major species for the whole Province as well as a high quality management regulation (reduced limit) which has been applied to many lodge and outcamp lakes. One operator is experimenting with a no kill policy on a trophy pike outcamp lake in 1984.

Future Trends

Commercial sport fishing is a growth industry in Manitoba and resource potential exists for additional development. In Division 1 the resource supply is limited and the potential for significant new lodge development geared primarily towards sport fishing is not high. Development activity will be aimed largely at maintaining and enhancing the commercial viability of existing operations which are likely to orient themselves more toward the general family vacation market in the future.

Division 2 has a long established commercial sport fishing industry. Major lakes presently have high levels of development and investment and the future viability of some in terms of primary commercial sport fishing operations is in doubt. For road accessible lodges the trend will likely be towards market diversification where the family fishermen/vacationer will be an increasingly important component. The resource base for existing fly-in lodges in Division 2

is not large and their future viability as high quality angling establishments will depend on resource conservation practices and the extent to which they can expand their resource base in terms of outcamp and boat caches on surrounding lakes.

The large resource base required for major new lodge development does not exist in this region, however, there is some potential for the development of boat caches, outcamps and possibly one or two mini lodges.

First priority for outcamp and boat cache development will be given to the lodge industry. However, there is potential for further development and upgrading with respect to road-end fly-out sport fishing and wilderness river canoeing type outfitting operations and qualified outfitters will be given consideration in this regard.

In Division 3 the major allocation of sport fisheries resources is to large American Plan lodges. The area to the east side of Lake Winnipeg is presently heavily developed in terms of lodges and outcamps. Generally fisheries resources are developed to a higher level than lakes in the mid and far north and this is reflected to some extent in the quality of angling, the type of clientele and in the price structure. This trend will likely continue although a few operators are starting to show an interest in high quality management and resource conservation programs.

In the mid and far north some potential exists for additional lodge development but the reallocation of resources from commercial net fishing is required in most cases. It is estimated that 6 to 12 lakes with sufficient resource base to accommodate 25 - 30 bed lodges could become available for development in the future. The rate at which development takes place will depend, in part, on market demand which is expected to grow moderately over the medium term.

High costs of moving large numbers of people over distances encountered in the far north will necessitate the construction of air strips and the use of larger wheel equipped airplanes. Five lodges in Division 3 have private air strips at present while an additional four lodges have access to public air strips. The pattern of an operating sphere with respect to outcamp and caches around a central lodge-air strip facility is starting to emerge with respect to existing operations and this concept will likely become more prevalent.

Provincial Fisheries Strategy Considerations

Sport fisheries management and resource allocation in the province is guided by management and allocation policy as outlined in the Manitoba Fisheries Strategy.

As stated by the definition, an objective is a broad ideal that is sought after over time. Because of the valuable contribution that the fish resources makes to the Province, Manitoba recognizes the need for fisheries management "that will result in the greatest long term benefit to Manitobans and ensure survival and improvement of fish stocks".

Allocation Priority

The general priority for allocation of fisheries resources is as follows (in order of priority):

1. Treaty Indian fishing - as allowed by Treaties and legislation.

2. Resident recreational sport fishing - includes residents of Manitoba and residents of Canada.

3. Commercial uses, such as commercial net fishing, commercial sport fishing, bait fishing and fish farming.

4. Non-Treaty domestic fishing.

The above order of priority between types of use serves as a guideline for allocating a limited fishery resource where two or more categories of users are seeking to use the same resource. Because some degree of user tenure is recognized this list of priorization will not be used to terminate a user's access to the resource unless the resource is being threatened by over-exploitation or performance criteria are not being met.

Management Principles

Fisheries Branch, through experience and interpretation, application and administration of government policy and legislation has developed a series of management principles which serve as a general guide in the decision process. They are as follows:

1) Public costs and benefits are considered in allocation to "best use" and in resource enhancement and rehabilitation actions. Allocation of the resource base and resource enhancement and rehabilitation should provide maximum benefits to Manitobans. To determine "best use", social and economic benefits and costs have to be considered, both at the provincial and local levels.

2) The development of tenure in resource access rights by existing commercial users is recognized. Those users who have had access rights to the resource will be recognized as having some form of tenure. When tenure has been established, re-allocation without some form of compensation will only occur if the user fails to meet established performance standards.

3) Resource allocation to commercial users are subject to performance standards. It is important that commercial use of the resource generate an acceptable return to the Province. Should a commercial user fail to meet performance standards, re-allocation may occur to other commercial uses.

4) The principle of multiple fisheries use is applied in situations where it allows a more rational and beneficial use of the resource. Presently, multiple use occurs on a number of water bodies but it is not ideally suited to all situations. Each application of this principle has to be considered on an individual basis as each has its

own set of circumstances. With multiple use comes the possibility of real or perceived conflicts, especially between sport angling and commercial fishing. The solution to these conflicts may include user education and/or the seasonal or spacial separation of activities.

5) Fish habitat is essential to maintain a healthy and viable resource and therefore is a Branch responsibility. The continued loss and degradation of habitat is resulting in lost or stressed fisheries. The responsibility to provide habitat protection and/or enhancement is that of Fisheries Branch. In most cases, these actions will require inter-agency coordination and cooperation to be successful.

6) The principle of sustained yield is recognized as a fundamental factor in the management of any fishery. This is fundamental because maintenance of a resource base is essential to the operation and continuance of a fishery.

7) User groups are consulted when management decisions are being made regarding use of the resource. Effective liaison with user groups and/or communities are needed if the users and Fisheries Branch are to be fully aware of limitations and issues affecting management and use of the resource. Depending upon the situation and the level of the issue, consultation may take place with user groups on a provincial wide basis or with communities regarding specific areas.

Sport Fisheries Issues

Primary Issues

1. Provision of Adequate Sport Fishing Opportunities for Residents

The supply-demand imbalance is most acute in the southern region of the Province; Division 1 where more than 80% of the licenced anglers reside and where 72% of the resident angling effort and 55% of the non-resident effort occurs. The resource supply is being diminished by habitat loss and deterioration resulting from land use and deterioration resulting from land use and development activities that are not within the jurisdiction of Fisheries Branch. The fisheries resource is under severe exploitation pressure in intensive recreational use areas such as Whiteshell Provincial Park which is readily accessible from the City of Winnipeg where 50% of all anglers in the Province reside. In Division 2 a demand-supply imbalance exists on a lake specific basis where intensive lodge development and tourism related investment have exceeded resource carrying capacity. To date, efforts have been made to provide increased angling opportunities through stocking, to encourage less harvest through catch and release programs and to encourage harvest of underutilized species. While these programs have had some impact, demand is increasing and these measures may not be sufficient over time. Sport fisheries management programs will have to be revised and made more effective on an on-going basis.

2. Sale of Surplus Resource to Non-Residents

Economic benefit to Manitobans is the major criterion for allocation among commercial uses of the fish resource and all non-resident angling is considered a commercial activity. As a

consumptive use it competes for the resource base with commercial net fisheries and recreational angling by residents in many areas of the Province. While the benefits from tourist sport fishing as a whole are substantive and, in particular, the lodge industry appears to be performing well, some self-contained drive-in anglers are contributing very little. In some cases, especially on semi-remote and newly accessible lakes in northern areas, influxes of non-resident drive-in anglers are rapidly fishing down high quality lakes and severely impacting the viability of existing tourist establishments. While the economic performance of different types of tourist establishments and drive-in anglers needs to be assessed further, strategies for increasing the resource rent and/or reducing consumption by non-resident drive-in anglers are required.

3. Viability of the Lodge Industry

Fishing lodges and other tourist establishments are considered commercial users. As such, the major criteria for resource allocation is employment and economic benefits, to local communities in the first instance and to the Province as a whole. In northern areas the local employment criteria is paramount. Lodges are asked to make substantial investments and meet performance standards in return for some security of access to the resource base. The former image of lodge operations as tax write-offs or private holiday resorts for rich Americans are no longer valid and few such operations now exist. The current trend is toward owner-operated businesses which perform well with respect to allocation criteria and typically exhibit high occupancy and return rate of guests, sustained employment and good relations with local communities and good resource management practices, e.g. one trophy only and reduced limit policies. However, on-going viability of the American Plan lodge industry in the remote north will require further expansion and investments in capital infrastructure such as air strips. Remoteness and high quality angling are necessary ingredients and management and development programs and policies must reflect this. The viability of commercial net fishing on remote northern lakes has declined in recent years and the potential for future expansion of commercial sport fishing appears good. However, it is essential that northern communities have a more meaningful role in the action. The future viability of the northern lodge industry is largely dependent on the degree to which northern communities can be integrated into the complicated highly competitive lodge industry while maintaining the integrity of the industry as a whole.

4. Resource Enhancement, Protection and/or Rehabilitation

This is a broad issue that is long term in scope. While not restricted to sport fishing, it is critical to this resource use activity and involves maintenance, rehabilitation and enhancement of fisheries resources. This issue covers such areas as habitat protection and enhancement, protection and rehabilitative action.

Habitat loss and degradation caused by various land use practices has been occurring for some time in many areas of the Province. Although the problem is provincial in scope, it is most pronounced in southern Manitoba. Of primary concern are the drainage of wetlands, channelization, nutrient loading and destruction of riparian habitat and buffer zones. These processes are resulting in the loss of spawning habitat and highly eutrophic systems where both summerkills and winterkills are occurring. Habitat protection and water quality is not strictly a Fisheries Branch mandate, however, the central role of the fisheries management agencies is recognized. One of the most critical tasks is the establishment of effective on-going liaison and communication with other land use and development agencies such as Agriculture, Water Resources, Forestry, Mines, Highways, Municipalities and Industry that impact fish habitat and the fish resource itself. Resource allocation to degradative uses must be made explicit and accounted for as a cost of development. The fish culture program plays an important role towards the resolution of this issue. The hatchery system provides a variety of fish species that are used to restore fisheries affected by habitat loss, augment present stocks, and create further angling opportunities in areas where limited opportunities exist. To make this approach effective, stocking strategies must reflect the demands and needs for this type of activity.

Ancillary Issues

5. Control of Non-Native Fish Species and Aquatic Invertebrates

The introduction of non-native fish species and invertebrates poses a potential threat to Manitoba fisheries. Possible avenues of importation of noxious species and disease include watershed modification and diversion projects like Garrison, importation of live bait into Manitoba by anglers and the international aquarium fish trade. A review and assessment of the effectiveness of current regulations and policy in curbing the introduction of undesirable species is required.

6. Technological Development

The past decade has been one of rapid technological development in sport fishing and has seen the emergence of a more informed and better equipped "high tech" angler. Not only is the angler willing to spend large sums of money on specialized boats and equipment such as depth sounders, down riggers, etc., but he has also become much more knowledgeable about fish biology, and behaviour through a profileration of fishing magazines, books, seminars and schools. The end result is a more effective angler who is putting increasing demands on a resource that is already stressed in many areas. It is essential that anglers become more aware of resource limitations and more responsible in terms of resource conservation.

7. Access to Remote or Semi-Remote Fisheries

Although it may be desirable to provide access to certain water bodies, most fisheries experience negative impacts over time in terms of angling quality when access is improved. Restriction on access is

presently the only practical means of maintaining high quality fishing and thus must be considered a legitimate management tool. The creation of new access and the inevitable decline in angling quality should be a deliberately planned process rather than a unilateral action on the part of some agency.

8. Management Education

In view of a general deteriorating supply-demand imbalance resulting from habitat degradation and increased levels of angler effort and skills, it is essential that angler education become a management priority. The angler must have some awareness of environmental problems, resource limitations and the high cost of mitigative and enhancement programs. Ultimately the only management tool available is to make sport fishing less consumptive, i.e. reduced limits and catch and release fishing.

9. Live Bait Fish

The use of live bait fish does not appear to be beneficial to sport fishing over the long term because of the risk of accidental introduction of undesirable species via the bait bucket. The use of live bait fish in Manitoba is presently restricted to the southern region of the Province (Division 1) excluding provincial parks and forests and stocked trout waters. A moratorium presently exists on the expansion of the live bait industry and on the licencing of new live bait fish. Experience elsewhere has shown that once anglers become conditioned to the use of live bait and the commercial infrastructure has developed the process is practically irreversible.

10. Derbies

The trend in recent years towards professionalism in sport fishing and big money fish derbies often involving thousands and hundreds of thousands of dollars is a source of management concern. Aside from ethical and moral questions of whether it is appropriate to use fisheries resources as a vehicle for high stakes gaming, such derbies are often inconsistent with management objectives, e.g. where a derby results in additional angler effort on small resources or on stocks that are already heavily exploited. Derbies could be of some benefit to management by promoting catch and release, use of under-utilized species, etc., but clear guidelines are required to guide future derby activity.

11. Provincialism and Regionalism

Sport fisheries protectionism on a provincial and regional basis will be detrimental to sport fishing in Canada as a whole. Fishery resources are not evenly distributed between and within provinces. For example, Manitoba anglers benefit by the fact that the extensive sport fisheries of Northwestern Ontario are easily accessible from the City of Winnipeg. On the other hand, fisheries in western Manitoba, including intensively managed stocked trout fisheries in the Duck Mountain Provincial Park, are heavily utilized by anglers from

Saskatchewan. Similar situations exist in many other provinces. Interprovincial cooperation on such matters as licence reciprocity, management of border waters, introductions of undesirable species and other management matters of common interest should be encouraged. More acute interprovincial regional supply-demand situations may bring calls for the priorization of angling opportunities on a regional basis. This issue should be addressed both at a provincial and at a national level.

12. Allocation

Increasing demand for use of the resource by commercial net fisheries, commercial sport fishermen, subsistence fisheries and recreational anglers emphasize the need for policy and procedures to deal with allocation both between and among user groups. Allocation policy must incorporate the concept of multiple use - that several uses occurring on the same body of water may allow for a more complete and beneficial use of the resource base. A common belief by sport anglers is that commercial fishing eliminates high quality angling. This has not only created pressures to eliminate commercial fishing on some lakes but has discouraged the concept of multiple use. In some instances the concerns are valid, however, multiple use is presently occurring successfully on several water bodies in the Province and potential exists for many more non-conflicting situations. The solution to a conflict situation does not necessarily mean the elimination of one of the conflicting uses. Criteria for non-conflicting multiple use must be developed for inclusion in the allocation process.

Sport Fisheries Management Objectives

Provincial

The broad overall sport fisheries management objectives for the province are as follows:

1. To ensure reasonable levels of recreational sport fishing opportunities for residents of Manitoba.

2. To realize an acceptable return from the sale of surplus resources to non-resident (of Canada) anglers.

3. To minimize the loss and degradation of fish habitat due to other competing and non-competing resource uses and to improve degraded habitat.

Regional

Division 1 - Southern Region

1. To maintain a base level of angling opportunities for residents.

2. To provide some opportunities for higher quality angling.

3. To maintain and improve the viability of existing commercial sport fishing operations.

4. To offset resource losses due to habitat loss and degradation through enhancement programs.

5. To maintain the level of sport fisheries resource harvest at or near present levels.

Division 2 - Road Accessible North

1. To maintain the present diversity and generally high level of angling quality and opportunities for some trophy fishing.

2. To maintain the region's existing status as a destination for drive-in resident and non-resident sport fishermen.

3. To improve local and provincial benefits from the harvest of fishery resources by non-residents.

4. To enhance the viability of the existing road accessible and remote lodge operations.

5. To improve the availability and quality of fly-in outcamp facilities.

Division 3 - Remote North

1. To maintain the remote character and high quality trophy fishing on designated lodge and outcamp lakes.

2. To establish a climate which will attract the level of business investment necessary for long term economic viability and the further development of a high class remote lodge industry.

3. To integrate northern communities into the lodge industry to provide for more meaningful involvement while maintaining the integrity and viability of the industry as a whole.

Policies and Programs

Management Regulations - over time management regulations will reflect an increasing emphasis on recreational rather than consumptive sport angling and a "pay for resources used" approach to non-resident angling. Some potential means are as follows:

- catch limits in high demand recreation areas such as provincial parks will be reduced over time,

- high quality management and trophy regulations will be applied to designated remote and semi-remote lakes,

- licence fees for non-resident anglers will be geared toward the level of consumption (limits) rather than period of validity,

- licence fees of resident anglers will reflect the cost of management programs.

Management Education - angler education will become an increasing vital management tool with the major emphasis on resource limitations and conservation and habitat/environmental concerns.

- management related articles will be made available on a regular basis to fishing magazines and other news media,

- liaison with users and user groups and individuals and agencies affecting fish habitat shall be a priority management activity,

- the Manitoba Wildlife Association and the Manitoba Lodge and Outfitters Association will be recognized as the major voice for recreational and commercial anglers in Manitoba.

Allocation - the allocation of sport fisheries resources within overall priority of use will be guided by the following:

- resident sport anglers will have universal access to fisheries resources,

- first priority for commercial sport fisheries allocation in Divisions 1 and 2 will be to licenced lodges who are meeting performance standards,

- allocation of commercial sport fisheries resource in Division 3 will be restricted to existing lodge operators who are meeting performance standards and local community initiatives,

- the level of development and investment in commercial sport fisheries allocation will be geared to resource capacity and value,

- where the principle of multiple use is applied to lakes where only one user currently exists the new use shall be secondary in terms of allocation priority,

- where resource conflicts arise between resident sport anglers and tenured commercial users mutual accommodation through consultation, negotiation and management agreements will be pursued,

- commercial net fishing on large road accessible lakes will continue to be a major user in the future.

Resource Enhancement - This program is broad in scope and covers such areas as resource and habitat protection, enhancement and rehabilitation and fish culture. Some key factors:

- fish habitat is a Branch responsibility and therefore fisheries must take a lead role in liaison with other agencies that impact fish and fish habitat,

- allocation of resource to degradative or non-sensitive uses should be made explicit, i.e. resource losses should be considered as a development cost,

- to adequately address the enhancement issue comprehensive strategies, programs and new sources of funding are required,

- the involvement of agencies and individuals that affect fish habitat as well as resource users is essential to the solution.

Fish Stocking - The hatchery system and fish culture is viewed as an integral part of the resource enhancement program. Stocking activities will be guided by the following:

- the major criteria for stocking is resource demand,

- stocking programs will focus primarily on the enhancement of self- propagating stocks that have declined due to habitat degradation or are otherwise limited by critical (spawning) habitat,

- limited stocking of exotic species for the purpose of angling diversity is justified,

- the stocking of catchable size fish will be restricted to small water bodies with low productivity capacity in areas of high demand.

Discussion

Bill Masse: Regarding your division of anglers, particularly resident anglers, among what you call commercial and recreational, I would be interested in the rationale you use where you discriminate between these two types of anglers?

Don Toews: There are some discriminatory regulations in Manitoba that restrict on a very lake specific basis as to where nonresident anglers can and cannot angle. These regulations have been applied in response to a very specific demand. For example, we had a lodge in northern Manitoba employing 30 or 40 people in a local community that was generating $100,000 in terms of employment. A road was opened up into this particular lake and soon we had a tent camp of nonresident anglers at the end of this road. The lodge would probably have gone out of business in about one or two years time and so we passed a regulation restricting nonresident anglers on that lake unless they were staying at this particular lodge. If this were done on an extensive basis there is potential for a backlash from nonresident anglers, so we put a lot of effort into explaining it to nonresident anglers. When we had enquiries, we would call these people in the U.S. and explain why we passed this regulation. We only had one or two individuals who were really upset after we explained why this regulation had been put in place.

Roger Liddle: Your comments on lodge development related to resource capacity is akin to possibilities our industry thinks should be implemented in some remote areas, for example, trophy fishing, trophy harvest and reduced take harvest. Have you considered any types of harvest such as that on these remote lakes?

Don Toews: The lodge industry took the initiative in Manitoba about five years ago. We had operators coming to us and saying, listen, I recognize the resource is limited, can you put a one trophy only regulation or a high quality management regulation on my lake. And we eventually responded. In 1982, we put a one- trophy-only policy on all lakes in northern Manitoba. That restricted anglers to one fish over a certain size. They could take smaller fish. Most lodge operators in the north allowed their guests only one trophy fish --

period! We also instituted a high quality management regulation which in fact reduced limits for some our northern lodge lakes. In terms of the lodge formula, we are working on it at the present time. We recognize that the amount of resource you can take out of a lake is a function of the angling quality which you hope to generate from that particular lake. It varies in Manitoba on the east side of Lake Winnipeg which is a remote area where lakes are developed, to about 30 to 60% of what we call the sustainable yield. There they cater to clients who pay on the average of $300 and $500 a week and they are providing an adequate quality of fishing. In the remote north, the clients are paying between $1,200 and $2,000 a week. They expect higher quality fishing and in fact we look at 10 to 15% of MSY as an acceptable level of development. In terms of a very remote northern lake trout lake, it's closer to about 5% of the MSY, as the level of development that we are looking at.

Lee Straight: These restrictions you outlined in all those places; is there totally free access for residents of the province?

Don Toews: Yes there is, and that's one of our policies, basically, that residents will have universal access. These are remote lakes and the number of residents who spend money flying in to these remote lakes is very, very small.

Saskatchewan

Saskatchewan Fisheries Policy: Action Plan

Ron Johnson
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Department of Parks and Renewable Resources

Presented to Saskatchewan Department of Parks and Renewable Resources by Fisheries Branch, January, 1984.

Executive Summary: Part A

Situation

The Saskatchewan fisheries sector is a major contributor to the recreation, tourism, and renewable resource industries of the provincial economy. Gross expenditures by all fishermen in activities directly related to fishing, totalled $104 million in 1980. About 230,000 anglers fished in Saskatchewan in that year. Close to 3,400 jobs were involved in the commercial and sport fishing industries; 1,400 of these were commercial fishermen. Annual capital investment by all fisheries exceeded $63 million, of which $57 million was major purchases by anglers. Angling is a major attraction for tourism in the province, and the substantial outfitter industry is largely dependent on the fish resource.

Saskatchewan is a land of contrasts, with a great variation in distribution of water, people and wealth among different regions. Thus, the users of the fish resource vary widely from one area to another and options for management must accommodate both local situations and a provincial overview.

While the overall supply of all species remains ahead of harvest at present, a disproportionate harvest is coming from lakes near the boundary, and south of, the Precambrian Shield. Whitefish, walleye, pike, and lake trout populations have collapsed or are in jeopardy in some lakes.

Projections indicate the difference between supply and harvest will narrow significantly over the next decade, and that over harvesting and user conflicts will escalate unless corrective measures are taken.

Issues

Key issues which need to be addressed are:

(a) Supply/Demand Imbalance

Overharvesting from large (and increasing) numbers of users, abuse of overlimits, and illegal fishing gear have resulted in collapse or decline of fish in a number of lakes. There is an overlapping preference for certain species by user groups.

Some fish spawning and nursery areas have been eliminated and lakes rendered unsuitable for fish life through land use practices. Pollution has rendered fish unpalatable or unsafe to eat in several lakes and rivers.

Fish enhancement techniques have not been implemented to the required extent in Saskatchewan. Prohibitions to access have limited fishing opportunities in some waters.

(b) Allocation Conflicts

Two principal conflicts exist: between recreational and commercial fishermen; and between traditional resource users and others. Anglers and commercial fishermen compete for walleye, lake trout, and pike, often on the same lake and at the same time. Harvest of these species is essential to economic operation of commercial fishing. Commercial fishermen believe that management is aimed at supporting recreational fishing and eliminating commercial fishing; anglers believe commercial fishing is destroying gamefish populations and that subsidies are supporting uneconomic commercial operations.

Native people are aware their treaties, their dependence on the resource, and their way of life entitle them to certain claims and rights to the fish resource. Anglers resent Indian harvest of game fish, particularly when the nets are not properly maintained.

Minor conflicts include competition between west side and Alberta anglers, and between resident and non-resident anglers.

(c) Development Constraints

New resources are required to develop various fisheries opportunities to achieve a more balanced utilization of available fish and to generate significant economic activity of benefit to the

shrimp and commercial fish product industries, and improving the commercial and sport fishing industries.

Goals

The desired end of fisheries management is to have a satisfied public with access to stable, healthy fish populations. The main goals are:

Supply - to maintain and where possible, increase the sustainable supply of economically usable fish through conservation and enhancement initiatives.

Allocation - to have satisfied user groups who have been equitably allocated sustainable supplies of fish.

Development - to increase contribution to the provincial economy through income to industry and revenue to government.

The Fisheries Branch has both a conservation and development role:

- The conservation role is regulation of fish harvest and users to maintain fish stocks; control of practices affecting fish habitat; and education of users about the resource and factors affecting it.

- The development role is the undertaking of enhancement initiatives to increase fish stocks and fishing opportunities; and promotion of economic benefits where undeveloped potential exists.

Fisheries Policy

The fisheries policy to guide the direction of fisheries management in Saskatchewan will be:

(1) A balanced program of increased enhancement and more restrictive regulations to maintain or increase fish supplies.

(2) Fisheries resource allocation priorities based on: (a) economic benefits; and (b) "quality of life" for the residents of the province as the basis for allocation decisions.

(3) Selected development initiatives to promote social and economic returns from fisheries having unrealized potential and bring a better balance of fish populations through harvest of unused species.

(4) Supplemental support to these policies includes intensified zone management; increased effectiveness of enforcement; and expanded data base; and an information/education thrust.

Action Plan

Strategies to implement the preceding policy include:

- Supply/Demand

(1) Develop fish enhancement programs to increase fish stocks and fishing opportunities through fish culture projects and through habitat improvement:

- implement lakeside walleye/whitefish rearing ponds to increase fish stocks where these are endangered or collapsed. This could increase walleye annual production by 0.5 million pounds from 17 lakes and increase whitefish annual production by 2.2 million pounds from 11 lakes;

- expand the stocked trout program from the present 120 waters to 180 waters and stock existing waters more heavily to meet increasing pressure. This would require an incremental 0.65 million fingerlings to be purchased from commercial suppliers;

- construct fish spawning beds; provide access to spawning/nursery areas; and carry out stream improvement to increase fish carrying capacities;

- develop doorstep angling opportunities near population centres and in heavily used parks.

(2) Change fish conservation legislation to protect fish at critical times and balance harvest with the available resource:

- initiate a new conservation ethic of closed fishing seasons during spawning periods;

- introduce new fish management zones to balance increasing pressure with availability of fish;

- reduce limits in areas where excessive harvest exists.

(3) Increase the fish farming industry substantially over its present capacity:

- promote hobby and commercial fish farming through waterbody identification, information dissemination, and market organization and development;

- develop a pond-rearing facility to raise rainbow trout in waste-heat water at the S.P.C. Boundary Dam Generating Station at Estevan. Initially, this would be capable of raising 200,000 fingerlings and could be expanded;

- demonstrate fish farming for native people on Indian reserves;

- utilize suitable Crown waters in northern areas for fish farming.

(4) Involve the fisheries discipline to a greater degree in land use planning and activities to protect existing fish habitat:

- reduce potential for fish habitat destruction in the planning stages of land use projects, flood and drainage proposals, etc.;

- incorporate fisheries mitigation and enhancement measures into major land use development proposals, such as rearing ponds at Nipawin Dam, to compensate for loss of natural spawning areas;

- increase habitat protection capabilities to prevent loss of fish habitat through forestry operations, road building, and small development projects.

- Allocation

(1) Develop an allocation process which:

- ensures that all users of the fish resource have input into allocation decisions;

- ensures that resource allocation is commensurate with maintaining the supply of fish;

- recognizes that domestic use of fish for Treaty Indians and residents in remote northern locations has first priority;

- recognizes that economic benefits and social factors are important considerations in allocation decisions;

- ensures that where commercial fishermen are presently dependent on sale of game fish for a living, harvest of these species will not be discontinued. However, there will be no planned expansion of commercial harvest of game fish;

- encourages the commercial harvest of fish species other than game fish to help maintain a desirable balance of fish populations.

(2) Encourage local commercial fishermen organizations to control the number of participants and ensure their operations achieve reasonable economic returns from the fishery.

- Development

(1) Develop the unutilized brine shrimp industry:

- provide assistance to overcome technical problems related to harvesting and hatching of eggs;

- provide assistance and expertise to develop new markets and overcome market monopolies.

(2) Improve commercial fishing operations:

- construct/upgrade fish packing plants;

- form a commercial fisheries development unit to advise/educate fishermen on improving operations:

  . ensure that fishermen maximize benefits through co-operative ice harvest and lake harvest assembly operations;

  . guide commercial fishing towards the times of year when maximum benefits can be obtained;

. work with the Freshwater Fish Marketing Corporation and/or other agencies in developing Saskatchewan markets for Saskatchewan fish;

. develop the commercial bait fish and commercial fish farm industries;

- ensure the commercial fish subsidy program provides for the optimization of commercial fishing operations.

(3) Fish product development:

- provide assistance in product and market development of items such as whitefish caviar; fish meal/oil/fertilizer/animal food; canned or smoked fish from unutilized species such as suckers.

(4) Tourism marketing of sport fish:

- encourage northern communities to benefit from marketing of fish through tourism;

- diversify angling opportunities by introducing new species of fish, eg. bass, Atlantic salmon, coho salmon.

- Support Services

(1) Establish additional fishery management zones to focus greater attention on local situations and facilitate enhancement projects.

(2) Increase effectiveness of fisheries enforcement to deal with specific problem situations.

(3) Expand the fisheries data base monitoring program.

(4) Initiate an information/education thrust:

- provide an information officer and program to inform the public of the character, value and needs of the fish resource;

- promote harvest of underutilized species by changing the consumer's image of fish such as burbot and suckers, which are presently discarded;

- prepare a comprehensive book on the "Fishes of Saskatchewan".

Financial Requirements

Implementation of these strategies necessities a holistic resource management thrust that will require an incremental $6.8 million over the next five-year period, in 1982 dollars. This will be recovered through increased licence fees; royalties and sales tax; and possibly, cost-sharing by federal agencies.

A 'Fish Enhancement Fund' has been established for projects which will increase fish supplies and fishing opportunities. This fund will be financed from a portion of the revenues received from the sale of provincial angling licences.

Conclusion

Implementation of the policy and strategies will bring greater economic returns to the provincial economy; satisfy the greatest number of resource users at a reasonable cost; increase government revenues; and result in increased awareness of Saskatchewan's valuable fish resource.

Implementation Thrusts for the Sport Fishery: Part B

Purpose

As part of the "Saskatchewan Fisheries Policy - Action Plan", this document is intended to:

- provide further background on the Saskatchewan sport fishery;
- outline an action plan for management of the sport fishery; and,
- define budget needs.

Situation

Approximately 230,000 anglers fished in Saskatchewan in 1980. More than 2 million angling days were spent on sport fishing in that year. At least 5.5 million fish were caught and retained by anglers, weighing 5 million kilograms (11 million pounds). This catch was slightly larger than the commercial fishing harvest of all species. Over 80% of the sport fishing harvest was taken by Saskatchewan residents.

Sport fishing motivation and tradition is very strong in Saskatchewan. The total number of active resident anglers was about 172,000 in 1980, including some 38,000 youngsters who did not require a licence. Some 62% of these residents had also fished in 1979 and about 45% of them had angled in 1975. More than half of Saskatchewan anglers come from rural areas.

Saskatchewan anglers owned over 56,000 boats (valued at $120 million) in 1980 and angling accounted for nearly half of the total boat usage.

Angling is also a major tourism attraction for Saskatchewan. It drew some 57,000 active angling visitors to the Province in 1980, of which about 19,500 were non-Canadians. The total number of visitors increased 4% over 1975 and occurred entirely among Canadian visitors.

Sport fishing holds major economic significance for Saskatchewan. Anglers spent and invested over $103 million in 1980, of which $70 million was wholly attributable to sport fishing in Saskatchewan. The visitor portion of gross expenditures totalled nearly $15 million. American anglers accounted for two-thirds of this total by virtue of heavy patronage of outfitters. More than 700 jobs were directly supported by sport fishing in 1980, and about 180 outfitters depend on angling for their business success. Government revenue in

1980 from sport fishing exceeded $7.5 million: from licence fees, camping fees by anglers, and sales tax on fishing related purchases. Government expenditures on sport fishing totalled $2.2 million in that year.

The main fish species taken by anglers in 1980 were pike, perch, and walleye. Overall, walleye is the most preferred game fish. However, the various trout species and arctic grayling are eagerly pursued.

Most angling takes place in the southern half of Saskatchewan where only 10% of the province's water bodies are located. Northern sport fishing is a growing activity and adds to existing pressure on the northern game fish resource. While the overall supply of game fish remains ahead of harvest at present, a disproportionate harvest is coming from a few lakes in the north, and from a larger number of lakes near the border of the Pecambrian Shield.

High fishing pressure by visiting anglers in the western part of the province and by drive-in anglers in central and northern Saskatchewan, holds the potential of disturbing delicate supply/demand balances. Careful monitoring of these activities is necessary to prevent resource exhaustion and adverse effects on northern outfitting.

Sport Fishery Management Actions (5-year scenario: 1984-89)

Sport fishing is an important industry in Saskatchewan. The number of active anglers (230,000) is projected to increase by 60% over the next decade; the fishery presently harvests half of the total provincial harvest of fish; anglers spend over $100 million annually; and angling is a valuable tourist attraction. To maintain this resource is a substantial challenge; to enhance and expand it will require major effort and expenditures. Thus, future management of the sport fishery must be given high priority by fisheries managers.

Management of the fish resource for the purpose of optimizing economic benefits to the province and recreational benefits for growing numbers of anglers requires:

- resource use planning;
- fish and habitat enhancement;
- fish and habitat conservation.

1. Resource Use Planning

(a) information collection and analysis, involving fish stocks, harvests, users, and economics:

- annual review of licence statistics;
- annual sampling of fish stocks in ± 100 smaller waterbodies;
- annual sampling of fish stocks in 10 - 12 larger lakes;
- annual creel census on 4 - 6 lakes;

- annual occupancy/harvest data from outfitters;
- province-wide sport fishing survey at five year intervals;
- outfitter economics survey at five year intervals.

(b) research into management problems:

- productivity improvement in 3 - 6 rearing ponds for walleye;
- a species management plan for perch;
- a trout management scheme for coal-mine pit ponds (Estevan area);
- lake productivity assessment as required, eg. outfitter leases, cottage subdivisions, etc.

(c) regional and lake-specific management plan development:

- identification of management zones for establishing seasons and angler quotas commensurate with regional productivity;
- development of 5 - 10- lake management plans in liaison with Parks and Lands Branch programs.

(d) continuing assessment of sport fish management techniques;

- trophy fisheries;
- fly-fishing-only areas;
- barbless hooks (catch-and-release);
- chumming (baiting areas);
- restricting angler participation (staggered days, areas, etc.);
- mandatory use of outfitter accommodations.

(e) tourism development planning:

- liaison with Department of Tourism and Small Business in development of a tourism policy;
- co-operation with provincial/federal agencies in developing a national recreation fishery policy;
- promote participation of northerners as outfitters to benefit from the recreational fishery.

(f) promotion of recreational fish farming to divert fishing pressure from fish stocks in public waters.

2. Fish and Habitat Enhancement

(a) fish culture and stocking program expansion, involving fish from the government facility and fish purchased from the private sector:

- stock Redberry Lake as a major new trout fishery;
- phase-in the stocking of 30-60 smaller new stocked trout waters;
- increase the stocking rates (where harvest is excessive) in the existing 120 stocked trout waters;
- provide trout fingerlings for stocking small lakes near outfitter camps, as need is demonstrated;
- meet the present walleye fry stocking program requirements and provide walleye fry for rearing ponds.

(b) development of rearing ponds for walleye and pike fingerling production:

- construct/operate up to 30 lakeside rearing ponds adjacent to lakes where fish populations have not been effectively maintained. Alternatively, construct up to 10 regional rearing ponds for intensive fingerling production and distribution;
- construct/operate rearing pond complexes as mitigation projects in the Qu'Appelle Implementation Program and the Nipawin Dam Hydro development.

(c) fish habitat improvement:

- lake aeration systems to overwinter fish in up to 10 lakes to utilize otherwise unsuitable waters;
- trout stream improvement projects on 5 streams;
- encourage development agencies to include fisheries requirements when planning construction projects, eg. dams, borrow pits, coal mine pits;
- construction of spawning grounds for up to 5 waters;
- installation of fishways where critical migrations are blocked.

(d) creation of new fishing opportunities:

- stock new species to diversify fishing experiences, eg. bass in Boundary Dam;
- "put and take" trout waters in heavily-utilized parks (eg. Moose Mountain) and near urban centres;
- arrange for access and stocking of highway borrow pits;

- stock trout in up to 5 inaccessible lakes to provide wilderness trout fishing experience.

(e) increased use of underutilized fish species and populations:

- promotion of burbot, whitefish, carp and suckers as sport fish;

- promote/provide access by road construction, land purchase, or negotiation, to inaccessible waterbodies, (eg. Cannington Lake, Porter's Dam near Moose Jaw, Estevan mine pit ponds);

- promote construction of access facilities (eg. boat ramps at Lake Diefenbaker).

(f) involvement of public in fish enhancement projects, eg. Saskatchewan Wildlife Federation clubs, fly fishers, schools, etc.

3. Fish and Habitat Conservation

(a) legislation and regulations:

- set closed seasons/areas to provide better protection for spawning fish;

- set provincial, regional and lake harvest quotas for resident and visiting anglers, and for unlicenced youngsters;

- effect habitat protection.

(b) increase enforcement and administration of regulations and zone/lake management.

(c) provide materials and training for field staff:
- seminars, fisheries bulletins, manuals.

(d) public information to optimize conservation:

- media presentations (T.V., radio, news releases);

- brochures, eg., "Where to Fish" book;

- book on fish of Saskatchewan.

Financial Requirements

Initial implementation of the sport fishery actions will require an incremental $3.4 million expenditure over five years. Arrangements are being pursued with the Government of Canada to provide substantial financial support for fisheries enhancement, habitat improvement, and other aspects of the program. A fish enhancement fund is planned to support implementation of the actions needed to optimize fishing opportunities in Saskatchewan.

Conclusions

Implementation of these actions will:

- satisfy the angling community by providing greater recreational opportunities:
- improve economic stability of the outfitting and tourism industry by maintaining sustainable supplies of fish;
- increase economic activity and government revenue; and,
- result in greater awareness and enjoyment of Saskatchewan's valuable fish resource.

Discussion

Scott Campbell: Are you going to couple enhancement with restrictive management? I like to view enhancement as sort of a quick fix that you wouldn't continue forever. In other words, is it to be coupled with some sort of restrictive management?

Ron Johnson: We've pushed the enhancement part, we haven't pushed restrictive management too far. Enhancement of course is geared towards re-establishing stocks that we've lost in a lot of major lakes in Saskatchewan. Hopefully, we have learned something along the way so that if we do get those stocks re-established we can make some progress. But there are a lot of problems. For instance, small mesh nets got into the north through the fur farm fishery years ago and we cannot control that. Fishermen have shot at pontoons on our planes, they have burned boats of the conservation officers; they figure that if they can get two sets with a net, that we can have it. After that they'll let us find it and take it away because they've made their money out of it. And this is why I say we need a holistic resource management thrust. We need more enforcement. If we don't enforce it, you can enhance all you like and it won't do you a bit of good.

Canada

The Management of Canada's Sport Fisheries: Key Areas for Program Development

Dick Roberts
Director, Economic Policy Branch,
Department of Fisheries and Oceans

Preface

This discussion paper sets out policy considerations and program development ideas relating to the management of Canada's sport fisheries. These considerations apply to both the sport fisheries managed directly by the Department of Fisheries and Oceans and those managed by provincial and territorial agencies under delegation arrangements with the federal government. Naturally, the Department focuses its primary attention on those fisheries managed directly by the federal government, reflecting our strong interest in

this important sector and our Minister's intent to recognize the legitimate role of the recreational fisheries and provide for its development. I hope that this paper will provide a useful contribution towards building a consensus on how Canadian government fisheries agencies might improve their efforts for the management of sport fisheries.

Introduction

The Recreational Fishery in Canada

The recreational pursuit known as sport fishing consists of a mosaic of activities. While the immediate target may be to catch fish, the circumstances surrounding the entire excursion contribute to the quality of the fishing experience. If the quality is kept high through appropriate resource and habitat management decisions, then Canada's sport fisheries will continue to attract large numbers of sport fishermen.

Enhancing the quality of the fishing experience is a goal worth pursuing, because as well as being a recreational pursuit, sport fishing generates considerable economic activity. Expenditures by sport fishermen help to maintain an industry based on the sale of boats, motors and gear, and on the services provided by hotels, marinas, guides, and charter boat operators. The infrastructure and jobs generated by these expenditures create regional development opportunities. The accompanying table presents data illustrating the dimensions of the economic activity associated with the sport fishery.

SELECTED SPORT FISHERIES DATA (1980)*

Number of Anglers	- There were 6 million anglers pursuing sport fishing in Canada: 5 million were Canadians (21% of the population) and one million were tourists from outside the country.
Expenditures	- Anglers spent $2.4 billion attributable in whole or part to sport fishing.
	- In terms of expenditures wholly attributable to sport fishing they spent $1.1 billion on fishing, travel, consumer goods, services and supplies. They invested a further $.5 billion in durable goods such as boats and motors, for a total of $1.6 billion gross expenditures and wholly attributable investment.
Export Earnings	- Anglers from the United States and other countries spent $300 million in Canada, accounting for 9% of Canada's total foreign exchange revenues from tourism.
	- With one million anglers visiting annually, Canada leads the world in the numbers of tourist angers.
Catch	- Anglers consumed 45,200 metric tonnes of the finfish they caught. This amount accounted for 39.5% of all the finfish caught and consumed in Canada. (This excludes fish imports and the 70% of the commercial catch that is exported).

* Data based on the 1980 Survey of Sportfishing in Canada.

- The angler catch of 73,170 metric tonnes was 6% of Canada's total sport and commercial finfish catch.

Investment

- The market value of sport fishing gear owned by Canadians was $1.2 billion.

- The market value of boats used partly or entirely for sport fishing was $3.1 billion.

- Given that these boats were used 46.5% of the time for sport fishing, the wholly attributable investment in gear and boats was $4.3 billion. (By comparison the 1980 market value for all ocean commercial fishing vessels was $1.7 billion).

Revenues

- In 1975-76, (the most recent years for which comparable data are available) anglers paid $14.3 million in licence fees. In the same period, a total of $5.5 million was paid in commercial licence fees.

The Resource and its Conservation

The sport fishery should be viewed in the context of the overall fisheries system which, in addition to sport fisheries, includes commercial fisheries and those fisheries carried out by Native people. All these groups compete for the resource, and growth in each group's fishing activities places considerable pressure on fishery stocks. This fact has several implications for fisheries management.

To assure the continued viability of a significant sector of Canada's economy, it is imperative that conservation of fish stocks and the habitats on which they depend be the primary goals of all user groups and of federal and provincial governments. When the resource base of any particular fishery is under such heavy pressure that overall yields and catches are declining, action must be taken to stop this decline and, if possible to restore stocks to optimal levels. In part, this can be done by enhancement and stocking programs, thereby reducing dependence on the traditional approach of adopting restrictive fishing regulations. In part, new approaches may be needed to manage and enhance the sport fishing resource.

The purpose of this paper is to raise the policy and management issues associated with the complex question of managing the sport fishery, especially in the context of competition from other groups which also have a stake in the resource.

Policy Issues

Policy issues facing the sport fishery fall into three categories. The first concerns the general principles that should guide decisions on sharing the allowable resource harvest among competing groups. The second category concerns the choice of regulatory and program measures to obtain maximum benefits from the sport fishery. The third policy area deals with the costs of management and access to the fishery.

1. Sharing the Resource

When pressure on a fishery calls for restrictive conservation measures, and when there is competition for that resource between sport fishermen and commercial and/or Native fisheries, questions arise as to how the resource - as well as the onus for conserving it - should be shared. Whatever the approach used to resolve this problem it must be based on complex economic, social and political considerations.

Those who benefit primarily from the sport fishery are the anglers themselves, and methods have been developed to measure the benefits they enjoy. These benefits can be weighed against the profits and other returns obtained by the competing commercial fishery, and these types of comparisons can justify giving priority to one sector or the other. In particular, it can be argued that the sport fishery generates more economic activity per fish caught than do the commercial fisheries. Those with interests in commercial fisheries reply that the fish available to them represents their livelihood. To commercial fishermen, sport fishing is a leisure activity for which there are substitutes. However, from a strictly economic viewpoint it can be argued that consumers are free to choose where to spend their recreational dollars; if individuals choose to "consume" sport fishing leisure, then the sport fishery must be credited for this contribution to the national economy. Sport fishermen spend millions of dollars that generate income and employment in the businesses which provide goods and services, including the preparation and sale of bait, the manufacture and sale of rods, reels, boats and engines, outfitting and guiding, and marinas, hotels and restaurants.

The economic issue is not a simple one. It is for precisely this reason that economic development considerations must be analyzed fully when establishing approaches to sharing the resource or sharing the onus for conservation. At present, the economic implications of sport fishing activity are inadequately recognized and understood. Research and analysis would help to fill this gap, thus contributing to decisions about the appropriate way to share the resource among competing interests.

2. Regulatory Measures and Program Development

Once decisions have been made about how the resource is to be shared, it is necessary to design regulatory measures and develop programs to maximize the benefits produced from sport fishing. Obviously the sport fish catch must be kept within the limits established through decisions on sharing the resource. In addition, regulations designed to limit the size and composition of the sports catch may be preferable to those that reduce opportunities to fish.

With these considerations in mind, the following possibilities for program development are available.

> Option 1 - Establish formal allocations or quotas for the total allowable catch. This approach would have the advantage of allowing participants in both the sport fishery and the commercial fishery to know precisely where they stand in terms of their share of the harvest. However, unlike the commercial fishery, where it is assumed that everyone can start at the same time and have a fair chance

at the allowable catch, this is not the case in the sport fishery. Indeed, it would be unfair to some anglers and to supporting service industries if the allowable catch were taken sooner than anticipated; anglers who had planned vacations around expected fishing dates would be disappointed, and guides and resorts would lose bookings. Some of these problems could be mitigated by assigning allowable rod-days and/or catch on fishing licences.

Option 2 - Establish principles regarding the onus for conservation. This approach would involve establishing, in advance of each season, specific regulations to meet conservation objectives for all fisheries, including the sport fishery. The conservation objectives would be based on the principles governing how the burden of conservation should be shared. For example, the principle might be that the onus for conservation should be borne equally by the sport and commercially fisheries, or proportionately more by one fishery than by another. The advantage for the sport fishery would be that participants would know the conditions under which the fishery would operate that season. However, the approach might also require regulatory measures, such as closures, bag limits and possession limits, that anglers would find restrictive.

Once appropriate regulatory measures are in place, the next issue is to develop programs aimed at getting the greatest possible economic benefit out of the sport fishery. It is impossible to generalize across all of Canada's sport fisheries, given their distinctive characteristics, but the following list sets out examples of programs that might be suitable for many fisheries. It also indicates areas where there could be a greater degree of federal/provincial and federal/territorial cooperation in those fisheries not directly managed by the federal government.

Habitat Conservation:

- development and implementation of a national fisheries habitat policy. (The Department of Fisheries and Oceans has issued a discussion paper on this subject and is planning extensive consultations before the policy is finalized);

- further research into the economic and biological effects of acid rain; and

- research into the feasibility of restoring damaged habitats.

Biological Research:

- research to address the problems of rebuilding depleted stocks of species of interest to the sport fishery;

- development of improved methods of resource assessment and forecasts, including development of the necessary databases;

- research into the effects of regulatory measures on sport fisheries;

- research into the potential for enhancing sport fisheries stocks.

Resource Enhancement and Development:
- the stocking of lakes and rivers with hatchery-reared juvenile fish as required or justified by resource management decisions;

- improvements in the capacity and efficiency of methods of enhancing production of fish;

- inter-governmental agreements and arrangements for fisheries restoration, enhancement and development.

Economic Research:
- continued methodology development and field research aimed at quantifying the value and economic implications of the sport fishery;

- assessment of the economic significance of the various components contributing to the "quality" of the sport fishing experience (including catch rates, crowding, isolation).

Data Collection:
- continuation of the federal/provincial quinquennial surveys of sport fishermen to determine their numbers and assess their participation, catch, expenditures, investment and interests;

- development of a federal/provincial sport catch and effort database that could be used for biological management needs, resource enhancement, habitat protection and economic evaluation.

Maintaining Quality/Fisheries:
- the use of lotteries, special regulations, tags, surcharges or taxes as well as higher licence fees, to control access to unique and valuable game fisheries.

Fisheries Diversification:
- provision of physical access (e.g., launching ramps) to open up under-utilized fishing area;

- enhancement programs to provide alternative target species in areas where the prime target species are under heavy exploitation;

- research into the development of reefs to create new habitats for fish;

- construction of piers from which anglers can fish.
(Some of these objectives could be achieved through the Department's small craft harbours program).

Tourism:
- research into the economic benefits of tourism related to sport fishing;

- the development of a province-by-province sport fisheries tourism marketing strategy;

- improved information service for the general public.

Recreational Charting:
- better charting of waters used extensively by recreational boaters and by sport fishermen.

Communications and Education:

- development of education programs to alert the public to conservation concerns about endangered species;

- the use of resource enhancement activities as vehicles for encouraging public involvement and awareness of the fisheries resource, particularly among school-age children;

- development and dissemination of literature on the preparation of different species of fish as food;

- distribution of literature on under-utilized or non-target species to educate anglers about their suitability for fishing and consumption;

- coordination to ensure that the appropriate emphasis is placed on the sport fishery in tourism marketing campaigns.

The Consultative Process:

- ensuring that sport fishermen have an effective means of participating in fisheries management decisions. (The Sport Fishing Advisory Board in British Columbia and the Atlantic Salmon Advisory Board on the Atlantic coast are two examples of specialized consultative organizations through which advice is channelled to departmental management and to the Minister of Fisheries).

- reviewing alternative consultative models with sport fisheries organizations and individual fishermen to determine the best way to have the views of sport fishermen reflected in the decision-making process.

The above listing is not comprehensive but identifies important areas for future activity in the management of Canada's sport fisheries. In putting this listing forward, the Department of Fisheries and Oceans will be following up in specified fisheries, hopefully in cooperation with other agencies, to reflect a more active approach to sport fisheries management.

3. Who Pays?

If governments are to become more involved in the management of the sport fishery - and bearing in mind that some fisheries resources of interest to anglers are also important to commercial and Native fisheries - a question arises about the amount that sport fishermen should be expected to contribute to the costs of managing and developing their fisheries. At present, anglers pay less in total licence fees than the costs incurred by the federal, provincial and territorial governments in managing the fisheries. What would be an appropriate level of cost recovery? How much would anglers be prepared to pay, and what would they expect in return?

As a starting point for discussion, the Department of Fisheries and Oceans submits that if the sport fisheries are to be developed, then sport fishermen should be prepared to make a greater financial contribution than is now the case in most fisheries. This raises the following questions:

(a) What proportion of fisheries management and development costs should be borne by sport fishermen?

(b) How should additional revenues be generated - by increased licence fees, tags, punch cards, taxes on equipment?

(c) Should a special fund be created to ensure that the revenues so generated are directed toward sport fisheries management and development?

Conclusion

This paper has attempted to set out several key issues and to raise questions central to the management of Canada's sport fisheries, particularly those managed directly by the Department of Fisheries and Oceans. The paper also offers a number of ideas for developing more specific programs to deal with these issues. In this context, the Department has indicated its willingness to consider new approaches to sharing the resource among competing users, as well as its commitment to a more active role in the management of the sport fisheries. The Department has also raised the question of whether sport fishermen should assume a greater portion of the cost of developing their fisheries.

Discussion

Ed Mankelow: Your paper says that at present, anglers pay less in total licence fees then the cost incurred by the federal, provincial and territorial governments in managing the fishery. My question really is, managing the fishery for who, for the sport fisherman or for all segments of the fishery, as far as the cost is concerned? In other words, do sport anglers pay less then the cost of managing the fishery for everybody, or just for the sports fishing segment?

Dick Roberts: Except through my income taxes, I don't pay anything directly for the management of the Ontario sport fisheries because there is not a resident fishing licence. In the British Columbia tidal fisheries, the revenues from sport fish licence fees plus the commercial licence fees don't come nearly close to the Department's budget.

Ken Loftus: The title says management of Canada's sport fisheries but about the middle of the preface it says "naturally, the Department focuses its primary attention on those fisheries managed directly by the federal government". I don't think those are by any stretch of the imagination the only fisheries to which Canada needs to direct it's attention. I think, as I tried to indicate here yesterday, most of Canada's sport fisheries are in between and most of them are in need of some partnership support. I am disappointed not to see it.

Dick Roberts: I think that the paper points out that there are areas here where federal and provincial agencies, the Department and provincial management agencies can work together. There are also areas, such as recreational charting and small craft harbours, where the Department does take an initiative in assisting in the development of the sport fisheries,. But, with delegated arrangements the responsibility, in effect, if not in strict legal terms, is with the provinces to manage their fisheries.

John Clarke: Back to page 13 and the question of how much would anglers be willing to pay; more appropriately, isn't the question how much are the users willing to pay the owners? I know we are talking about sport fishing here, but

the question seriously comes up, how much should commercial fishermen pay? How much should anybody pay and should we segregate it? Who cares what they use it for? Who cares? If you want to fish you pay for it, and you pay the demand price, thanks. That solves all our problems too, because you just elevate the demand until it finds its pricing level and that eases off on the demand for the resource. All you have to have is a bit of courage.

Art Holder: I have the same concern as Mr. Loftus raised and I was highly unsatisfied with the response. Normally with delegated responsibility, if one is to assume that there is some fairness in equity and tax dollars, with delegated responsibility would come a delegated share of resources. I think the federal government is being extremely blind if it believes that it can delegate authority without recognition of the fact that there is still a funding responsibility.

Pat Chamut: Coming from Ontario myself, I guess I have some sympathy for the views that are being expressed by our colleagues from the province. I think it is a very easy explanation to simply say that the federal government has delegated the fisheries management responsibility to the province and kind of wash our hands of it. I personally feel that there are legal obligations which continue on the part of the federal government which dictate that it should have a responsibility and a role to play in the management of the resource. Looking at Ontario, there are situations where we do get involved in providing support to provincial management effort, and I would cite things like the sea lamprey control program which is a direct involvement in a rehabilitation program in the Great Lakes. Small craft harbours and things like that which Dick did mention are another example. But more importantly, I think if we look at some of the needs within the sport fishery, things like habitat, conservation, regulatory process, all of those things depend upon federal-provincial cooperation. Many of the inland provinces which have been delegated responsibility for fisheries management do not have the legal authority to carry out the responsibility for habitat. I think that is an important matter that needs to be addressed within a forum like this. We can talk about resource conservation, but if the legal authorities have not been properly delegated, then really it is not too meaningful, and I think we should be looking at these things as policy issues here. I think that we should also be broad minded enough to start looking at areas like the Great Lakes where I think federal responsibilities do exist and where there could be some benefits from federal-provincial cooperation. One think I would like to seem coming out of this conference is some recognition that the job of managing the resource in many of the inland areas is bigger than any one agency can handle. It is certainly bigger than the province and it is not something that the federal government can do independently either. The idea of a better cooperative arrangement which commits agencies to cooperate, and to support each other, is important and it is something I very much would like to see coming out of a departmental policy and out of a forum like this.

Ron Johnson: I am glad that Pat brought that up because there are two provinces in Canada that don't have any regulations to govern sport fisheries right now. The courts have decided that we don't have the authority and that the federal government cannot delegate such powers to our Minister. One of the problems that we are having is that it takes anywhere from nine months to a year to get anything through your federal legal system. I don't want to point fingers at anybody but it is just a hopeless situation. The federal government doesn't seem to want to do anything about this problem of legislation and our hands are

tied. And I would certainly think that is one area that you can talk about all you like, but if we can't manage legally we don't have anything. There is another thing that I might as well say right now too and that is it is very easy of course for the federal government to develop a habitat policy but who is going to put that into implementation? That costs bucks. So that is another area that you mentioned that I think needs to be addressed, but this legal thing is really a problem to us right now.

Dick Roberts: It is a problem for us too and I think that is one message that we can take back to Ottawa, the frustration that the provincial agencies are experiencing with the process of implementing regulations. But returning to the point raised by Ontario on the fiscal side of things, I guess I just point out that if Ontario needs money it knows where it can find it by implementing a licensing system for resident fishermen. I mean I can't understand how you can cry the blues about funding and at the same time not have a resident licensing system.

Alberta

Fish and Wildlife Policy for Alberta
(as excerpted from the 1982 publication)

Ernie Stenton
Section Head, Sportfish Management,
Department of Energy and Renewable Resources

Foreword

Alberta's future is linked to its colorful past by a bond of fish and wildlife heritage. Early exploration of the Province was prompted by the potential harvest of our wildlife resources. The settlement of the Province was enhanced because of fish and wildlife populations. Fish and wildlife were, and still are, dependent upon habitat. It was habitat, the prairies, foothills, mountains, streams, lakes and forests, that made Alberta so attractive to settlement.

It is for these reasons that the future of Alberta's fish and wildlife resources are of concern to the people and the Government of Alberta. This Fish and Wildlife Policy for Alberta was prepared in order to recognize the significance of these resources and the enjoyment they bring to present and future generations of Albertans. It is important to note that, in the history of the Province, this is the first formal, comprehensive position of any government on fisheries and wildlife resources.

Although the Policy was developed in consultation with a broad range of public interests, the Government intends to conduct a periodic review of the Policy to ensure it relevance and acceptance by the people of Alberta. The implementation of certain aspects of the Policy will require further public input in order to ensure that the necessary procedures, guidelines or criteria are acceptable.

I look forward to the co-operation and support of all Albertans in the implementation of this Policy in order that we can collectively contribute to the maintenance and enhancement of Alberta's fish and wildlife resources, today and into the future.

J.E. (Bud) Miller, Associate Minister of
Public Lands and Wildlife.
October 14, 1982

Fish and Wildlife Outdoor Recreation Policy

Intent

To define the role and responsibility of the Fish and Wildlife Division of the Department of Energy and Natural Resources with respect to outdoor recreation in Alberta.

Policy

Legislative or operational responsibility for outdoor recreation (i.e, recreation where the natural environment or resource is the principle component) is a responsibility shared by several agencies of government. By virtue of the fact that all fish and wildlife resources and the relevant legislation are the responsibility of the Division, outdoor recreation based on fish and wildlife resources should be recognized and managed by the Division as an entity within a provincial outdoor recreation system.

It is fundamental that outdoor recreation should be addressed comprehensively, starting with the citizens needs and requests for the various forms and amounts of outdoor recreational opportunities, and the subsequent allocation and management of fish and wildlife resources and services in response to those requirements.

Therefore:

1) The Fish and Wildlife Division is to function within the provincial outdoor recreation system as the government agency responsible for the management and administration of fish and wildlife resources.

2) Facilities required to accommodate public use will not be developed by the Division except where such facilities cannot be accommodated by other agencies.

3) The general goal of the Division is to provide a variety of outdoor recreational opportunities based on fish and wildlife resources for the benefit and enjoyment of the citizens of Alberta. As general principles:

   a) The primary consideration for fish and wildlife outdoor recreational opportunities will be for the enjoyment of Alberta residents. However, the Division will promote fish and wildlife outdoor recreational opportunities to non-residents as an economic activity.

   b) Emphasis must be directed toward resources having major shortfalls between demand and supply.

   c) Planning priorities for the Division must be:

      (i) First, to identify very rare, scarce or special forms of fish and wildlife outdoor recreational opportunities and to ensure that access to these opportunities continues to be available to all Albertans.

      (ii) Second, to ensure that significant local resource (district) shortfalls are addressed regionally where possible.

   d) Access to those recreational opportunities afforded by fish and wildlife resources must be a consideration of the Division. Environmental and economic considerations, in addition to the quantity and quality of the experience, must be factors in determining the level of access.

4) A comprehensive ten-year fish and wildlife outdoor recreational plan will be developed by the Division. This plan should address such items as:

a) A description of present and projected demands for outdoor recreation based on fish and wildlife resources.

b) A description of the recreational fish and wildlife resources available.

c) The establishment of fish and wildlife outdoor recreational objectives and priorities.

d) A description of the habitat base necessary to achieve fish and wildlife resource supply requirements.

e) The role and relationship of the Division with other provincial agencies, most notably, but not limited to Alberta Recreation and Parks, Alberta Tourism and Small Business, and Alberta Environment, different levels of government, and quasi-public and private sectors.

f) Integration and coordination with other individuals, organizations and agencies that are involved in the planning and provision of outdoor recreational programs and facilities.

g) Public consultation in the development of the plan primarily through the Fish and Wildlife Advisory Council comprised of the following member organizations:

Federation of Alberta Naturalists
Indian Association of Alberta
Metis Association of Alberta
Travel Industry Association of Alberta
Unifarm
Alberta Association of Municipal Districts and Counties
Alberta Association of Improvement Districts
Alberta Fish and Game Association
Alberta Outfitters Association
Alberta Trappers' Central Association
Alberta Urban Municipalities Association
Western Stock Grower's Association
Commercial Fishermen
Alberta Forest Products Association
Oil and Gas Industry

h) Review of the objectives of the recreational plan every five years following the initial year of approval.

Fisheries Policy

Intent

To establish policy goals for the administration of fisheries resources in Alberta.

Policy

1) Fisheries is a replenishable Crown resource, it is incumbent upon the Government, as the resource steward, to ensure that appropriate use is made of the fisheries resource and that it is passed on to succeeding generations as it was received.

The primary consideration of the Government is to ensure that fisheries populations are protected from severe decline and that viable populations are maintained. By virtue of the fact that all fish and wildlife resources and the relevant legislation are the responsibility of the Fish and Wildlife Division of the Department of Energy and Natural Resources, it is to function as the advocate within government in the pursuit of this goal.

2) In order to achieve the above ends, the Government advocates the following fundamental precepts:

a) The fisheries resource, as a Crown resource, will be utilized in a manner which contributes the most benefit to the citizens of Alberta.

b) Fisheries legislation will reflect the minimum infringement of individual freedom of choice for the licenced user.

c) The role of government will be restricted to those things which clearly can be achieved only through government.

d) Regulatory controls will be applied so that optimum uses of the fisheries are not severely impaired.

e) Fisheries resources will be allocated through a defined process whereby specific resources are deployed to specified uses in order to achieve stated public benefits.

f) Fisheries programs will be delivered in as direct and expeditious a manner as possible.

g) The management of fisheries will be promoted on the basis of fundamental ecological principles.

h) The Division will promote excellence and high professional standards in the practice of fisheries management.

3) The Minister responsible for fisheries will periodically make a declaration of:

a) The present resource status, allocation and use.

b) Future issues and projected resource demands.

c) How the government plans to deal with these demands and issues.

4) In accordance with Paragraph 12 of the Natural Resources Transfer Agreement which states:

"In order to secure to the Indians of the Province the continuance of the supply of game and fish for their support and subsistence, Canada agrees that the laws respecting game in force in the Province from time to time shall apply to the Indians within the boundaries thereof, provided, however, that the said Indians shall have the right, which the Province hereby assures to them, of hunting, trapping, and fishing game and fish for food at all seasons of the year on all unoccupied Crown lands to which the said Indians may have a right of access".

The Government recognizes the rights of Alberta Indians to fish by licence for food on specific sites and the Fish and Wildlife Division will:

a) Endeavour to ensure that the allocation of fish stocks meets the resource requirements of Indians exercising their treaty fishing rights.

b) Manage fish stocks to meet Indian needs, to the extent possible, while maintaining the resource in a viable state for the benefit of all Albertans.

5) In recognition of the rights and privileges of Metis people concerning the use of fisheries resources on Metis Settlements, the Government recognizes regulations relating to fishing made under Section 8 of the Metis Betterment Act.

6) Fisheries resources must be allocated among different primary users in response to government policy. Until such time as supply and demand can be better rationalized, the following interim allocation guidelines will prevail in order of priority:

a) Other domestic fisheries as per policy outlined further in this directive.

b) Resident recreational use of fish will have precedence over any commercial use. Fish stocks not fully allocated or utilized to higher priority uses may be allocated to tourist use.

c) Primary commercial uses such as traditional commercial fishing, tourist angling, bait fishing or fish farming.

d) In situations where real conflicts exist among commercial uses; and where resolution cannot be deferred until the allocation process is functioning, allocate to the commercial use or uses which maximize local economic return for the use of the resource.

e) In situations where there is no commercial use at present, allocation of the fisheries resource will occur pursuant to Ministerial direction on a case-by-case basis.

7) Notwithstanding the interim allocation priorities outlined in section (6) above, the allocation of fish stocks to different primary uses does not imply that other incidental uses are not to occur. Specifically, regardless of allocation:

a) Resident sport fishermen are able to fish anywhere they are entitled to by their licence.

b) Other domestic fishermen are able to fish by licence in specific remote areas of the Province.

c) Non-residents are able to sport fish anywhere they are entitled to by their licence.

8) Private fisheries organizations, private individuals including land owners, corporations, research stations, universities and colleges, will be encouraged to provide assistance in achieving provincial fisheries goals.

9) The Division will promote educational programs with a focus on natural resource conservation and the role of safe and ethical fishing practices in the overall management of fisheries resources from an ecological perspective.

10) The Division will prohibit the unauthorized release of fish, whether they be native or non-native species to Alberta, in order to protect provincial interests.

11) The Division will develop and implement a system of fisheries resource allocation through a licence/quota which is transferable and assignable and has up to a five year term, renewable annually, subject to payment of annual fees and compliance with legislation and defined performance criteria, and under terms and conditions which establish and protect the rights of the individual and government as separate parties. The following segments of the fishing industry will be eligible for these licences:

a) Commercial fishing.

b) Tourist camps and/or lodges.

c) Commercial bait fisheries.

d) Under certain circumstances, fish farming on unoccupied and occupied Crown land.

12) Other Domestic Fisheries

Domestic fishing opportunities will be available to persons residing in remote areas of Alberta in recognition of the sustenance value of domestic fishing to them, and specifically the Fish and Wildlife Division will:

a) Allow, through a special permit process, local residents of designated remote areas of Alberta to harvest fish for their own use.

13) Resident Recreational Fishery

A variety of fishing opportunities will be available for the recreational benefit of Albertans consistent with the Fish and Wildlife Outdoor Recreation Policy through:

a) The recognition and promotion of recreational fishing as a legitimate activity from both an outdoor recreational and ecological perspective.

b) The promotion of an Alberta "recreational fishing ethic" as follows: Certain fishing rules are set by government regulation but many rules must be self-imposed. The ethical fisherman has respect for wild creatures, knowledge of his natural surroundings, a sense of fair play and consideration for the rights and expectations of others. Fishing, as promoted by the Alberta government, should foster an ethical relationship of the highest order between the fishermen, his quarry, his fellowman and the living environment. Ethical conduct is expected of fishermen in Alberta.

c) The recognition of the rights of private landholders and the role of private lands in providing recreational fishing opportunities.

14) Commercial Fisheries
The Division will encourage a viable commercial fishing industry. Toward the above noted end, the Fish and Wildlife Division will:

a) Develop a licence/quota system for commercial/fisheries which ensures long-term access to the fishery and which is assignable and transferable.

The following basic principles should apply to licence/quota transferability and assignability:

- the Minister retains the authority to adjust the allocation of fish in the quota in any transfer or assignment of licences.

- any transfer or assignment of a licence will be subject to a defined review process which allows the Minister to up to 90 days to assess the proposed transaction based on criteria or terms and conditions developed in conjunction with the Fish and Wildlife Advisory Council.

- the Minister retains the authority to adjust the allocation of fish in the quota at any time to serve the best interests of the resource and all Albertans.

b) Provide continued conditional support to the Freshwater Fish Marketing Corporation (F.F.M.C.) where the Corporation is performing a viable marketing service to Alberta fishermen.

c) Support any alternative marketing initiative that will perform a marketing service to Alberta fishermen currently not adequately provided by the F.F.M.C.

d) Support the formation of an Alberta Commercial Fishermen's Association.

e) Develop a licence or royalty system which provides a fair return to the Crown for the use of the resource.

15) Tourist Angling

The Division will encourage an environment that promotes the growth of the tourist industry.

It is important to clarify that the Division is not providing angling opportunities to non-residents for their enjoyment, per se; but rather, the Division will promote angling opportunities to tourists for the economic benefit of Albertans.

Within the context of this policy, General Tourist Angling and Tourist Camps and/or Lodges are considered separately:

a) General Tourist Angling:

(i) General Tourist Angling is, in effect, a tourist utilizing a resident use opportunity.

(ii) General Tourist Angling will be encouraged so long as it can be demonstrated that there are economic benefits accruing to Albertans.

b) Tourist Camps and/or Lodges:

(i) The Division recognizes that tourist camps and/or lodges are selling use opportunities, and that the strength of the industry is primarily determined by marketability of the opportunities.

(ii) The Division will pursue this policy through:

(a) Formally allocating the fisheries resource to tourist camp and/or lodge use.

(b) The authorization of tourist camps and/or lodges with specific use opportunities through a licence/quota system which ensures long term access to the fishery and which is assignable and transferable. This licence may include the identification of where the use opportunity may be exercised, and the use opportunity will not have precedence over resident use as per Sections 6 and 7 of the Fisheries Policy.

The following basic principles shall apply to licence/quota transferability and assignability:

- the Minister retains the authority to adjust the allocation of fish in the quota in any transfer or assignment of licences;

- any transfer or assignment of a licence will be subject to a defined review process which allows the Minister up to 90 days to assess the proposed transaction based on criteria or terms and conditions developed in conjunction with the Fish and Wildlife Advisory Council;

- the Minister retains the authority to adjust the allocation of fish in the quota at any time to serve the best interests of the resource and all Albertans.

c) Development of a licence or royalty system which provides a fair return to the Crown for the use of the resource.

d) Management of fish stocks to produce marketable fishing opportunities.

e) The provision of remote camps with specific use opportunities through a licence/quota.

16) Fish Farming

The Division will encourage an environment which fosters a viable fish farming industry. Specifically the Fish and Wildlife Division will develop a licencing or royalty system to provide a fair return to the Crown for the use of the resource for those operations on specified unoccupied or occupied Crown land.
The Division will encourage an environment which fosters a viable fish farming industry on private lands and Metis Settlements.

BRITISH COLUMBIA

Draft Goal, Objectives and Policies for Freshwater Fisheries Management in British Columbia

Ron Thomas
Chief of Fisheries Management Fish and Wildlife Branch
Ministry of Environment

The stream systems draining to the coastal waters of British Columbia produce abundant populations of Pacific salmon and are an essential element in the continuing productivity of major marine commercial and sport fisheries. Beyond this very important commercial function, the fresh waters of the province have little potential for sustained commercial production of resident species. For this reason, the major management emphasis has been and will continue to be on the production of fish for recreational purposes, specifically angling and non-consumptive use.

Although not presently legislated, the following precepts have guided the management, protection and development of our freshwater fisheries for the past two decades.

The Goal of Fisheries Management is to produce maximum economic, cultural, recreational and scientific benefits for present and future generations of British Columbians by:

a) **maintaining all native and desirable introduced species of fish at optimum levels of distribution, abundance and health, and protecting or enhancing essential freshwater habitat, and**

b) **providing an equitable distribution of opportunities for a wide variety of socially acceptable uses of fish by all segments of society.**

The most important element of freshwater fish production is habitat. The maintenance or improvement of critical aquatic habitat and the value of it must be constantly emphasized during the planning and implementation of water and land use developments, which can have detrimental effects on present and future productivity.

Public use and enjoyment of fish is enhanced by a wide range of opportunities for use such as: viewing of spawning fish, different methods of angling for a variety of species and sizes of fish, surroundings varying from remote wilderness locations, through more easily accessible natural environments, to less aesthetic but popular fisheries in more urban environments. These elements of the goal can only be realized through pursuit of the following more specific objectives.

Objectives of Fisheries Management

1. **Provide effective policy direction for fisheries management by development, implementation and evaluation of long range, strategic and operational level plans based on sound scientific and socio-economic principles.**

   The future productivity and economic importance of our freshwater fisheries depends largely on effective assessment and planning of resource use now. Identification and and protection of key habitats, provision of adequate water supplies in both quantity and quality, and measurement of levels of public use and satisfaction are key elements of planning.

   Many human activities which have potential for damaging fish habitat can be modified to eliminate or reduce damage. To effect such changes, accurate information on present levels of supply, demand and value are required, as well as an estimate of probably future increases or decreases in these areas. Plans must be assessed regularly and be subject to modification based on new information, public demand or improved technology.

2. **Protect the freshwater fish populations of the province and their habitats from degradation or loss through interagency planning and consultation, resolution of conflicting resource uses, enforcement of pertinent legislation, and control of import and transplant of live fish and aquatic invertebrates.**

   Our fish populations have developed characteristics which particularly suit them to survival in their natural habitats. Of the many activities of man which affect our fish populations, those which radically change or eliminate certain characteristics of their habitat are the most critical.

   Our rivers, streams and many lakes are essential to the economic and social development of the province. Water for domestic and industrial use, hydro-electric power development, irrigation, and the disposal of wastes are all presently acceptable uses of the public waters of the province. Many of these uses can be carried out with a minimal impact on fish production if the needs of fish are taken into account during the planning, developmental, and operational stages.

3. **Inventory and classify the waters of the province to determine their capability to produce fish, identify factors which limit present production and determine present levels of abundance and distribution of major species.**

A modest program of lake and stream inventory or assessment has been carried on for many years by the provincial fisheries management agency. Most of the larger lakes have been at least partially surveyed, but about 14,500 of the 16,500 lakes in the province less than one square kilometer (250 acres) in area have not been surveyed. Continuing inventory of small lakes and streams is a priority activity of fisheries management. While fairly good general information on distribution of all species is available, some are still extending their distribution by invading new systems. Accurate assessment of actual sizes of fish populations in certain representative systems in each region is prerequisite of effective management of stocks.

4. **Increase fish production through improvement of existing fish habitat replacement or repair of lost or degraded habitats, operation and maintenance of existing protection and production facilities and control or eradicate undesirable populations of fish in specific waters of the province.**

The rugged topography of the province causes many situations where fish production is naturally limited. Many potentially productive spawning streams are inaccessible to fish due to impassable falls near stream mouths. The total flow of other streams becomes subterranean at critical times of spawning or rearing due to the porosity of the gravel substrate or reduced flows resulting from competitive water uses. The construction of spawning or rearing channels can increase fish production while the use of fishways and proper design of culverts can make huge areas accessible to migrating fish. In other instances undesirable species of fish become established in lake or stream systems and severely reduce the production of more valuable species through competition, predation and disruption of habitat. Eradication of such fish restores the productivity of the system for more desirable species.

5. **Produce sufficient numbers of sport fish annually in the hatchery system to stock the hundreds of water bodies in the province which lack the natural ability to produce self-sustaining harvestable populations of fish.**

Most fish production of the province will continue to depend on natural stream and lake systems, but some waters lack or are deficient in certain requirements for natural production. Many small lakes throughout the province are ideal in other respects for production of game fish but lack stream spawning habitat. Such lakes are stocked each year with small fish which quickly reach catchable size due to abundant food supplies. Other lakes, which are attractive to anglers but produce little natural food, are stocked with near catchable sized fish to be caught soon after planting.

Stocking of streams presently takes place only in circumstances such as the introduction of a new species, or the establishment of populations in streams which contain no fish at all. A different situation exists with anadromous species, such as steelhead and cutthroat trout. In contrast to resident fish, which are entirely dependent on stream productivity, these migratory fish can be substantially increased by the planting of smolts which can migrate directly to the ocean. Following a period of rapid growth in the rich ocean waters, these fish return to the rivers in which they were planted and provide a much improved fishery.

6. **Develop and test new methods of increasing fish quality and production through applied research in limology, stream ecology, genetics, fish culture, habitat improvement and population dynamics.**

For many years there has been no real necessity for intensive management or husbandry of most fish populations as our native species were well suited to their environment and the supply of fish far exceeded the demand. Increased populations, leisure time and access to fisheries, alterations of habitat and a broader range of public desires related to fishing now makes a more intensive management program essential. Techniques for manipulation of the physical characteristics of lakes and streams, new strains of fish which provide better quality angling, and other innovative approaches to management, are being developed and tested.

7. **Ensure a diversity of opportunities for use of the resource and equitable distribution of harvest by development and enforcement of regulations.**

With a fixed amount of freshwater habitat available for the production of fish, increasing demand for angling opportunities, and a wide array of types of fish and angling methods, it is necessary to develop and enforce rules for the use of the resource. The primary use of most fisheries of the province is recreational. Within this policy context it is necessary to regulate harvests to preserve the numbers of fish required for production, or in the case of hatchery supported lakes, to distribute the available catch in an equitable way. This is the intent of daily and field possession limits.

While the main purpose of fishing is to catch fish, there are many different ways to do so. A wide variety of angling methods, trolling, still fishing, spin and fly casting are available and in some instances waters are regulated specially for certain uses.

8. **Measure present use, predict future demand and determine the economics and social value of the fishery resource through periodic public surveys and studies.**

Public participation in angling is increasing at twice the rate of population growth. With a relatively fixed supply of fish it is essential to have good information on use of the resource and the true economic and social values associated with it in order to ascertain the levels of investment appropriate for sound management and development. There is a real need to better understand the motivation of anglers, the kinds of experiences they prefer, and the levels of satisfaction derived from various types of fisheries. A proper assessment of the economic value of freshwater fishing is also essential if this resource is to be properly protected and managed.

9. **Encourage public involvement in development of management plans, angler ethics, fish production and habitat improvement activities and increase understanding of the fishery resource through a wide range of information and educational material.**

An effective fisheries management program must be sensitive to changes in public aspirations for use of the resource and one of our main aims is to satisfy public desires for a wide variety of experiences related to fish and fishing. Management staff are technically well qualified and virtually all are anglers, but it is essential that the public participate positively in program planning development. A better understanding of fish, their habitat and limitations of the resource, leads to more active involvement in their protection and use. Maximum public benefits will only be attained through positive public involvement in fisheries management.

Policies of Fisheries Management

The following six draft policies of the Fish and Wildlife Branch, Ministry of Environment, and the accompanying reasons for policy reflect the emphasis on the protection and maintenance of native stocks of fish and their primary use as a recreational asset.

1. **It is the policy of the Ministry to give first priority to the protection, maintenance and enhancement of wild native fish stocks, particularly salmonids, and that hatchery reared or non-native species or races will be released only where required to satisfy the approved operational fisheries management plan for achieving optimum benefits from the resources.**

   Reasons for Policy:

   1. Wild native fish species are naturally adapted to the aquatic habitats of the Province and are indicative of good water quality and healthy ecosystems.

   2. The protection of wild fish populations provides a natural source of fish for future management options by preserving genetic diversity.

   3. Salmonids are preferred by the majority of resident and non-resident anglers and presently constitute over 90% of the annual catch of sportfish.

   4. The introduction of non-native fish species or races may in some instances be beneficial but the potential impact on native species or stocks must be carefully considered before introduction takes place.

2. **It is the policy of the Ministry to use only wild endemic stocks of salmonids or first generation hatchery fish planted in lakes where natural selection may occur, for egg collection for fish culture purposes except in special instances where the continuous maintenance of brood stock is deemed desirable and cost effective or where wild fish returns are so low as to warrant the use of returning hatchery adults for egg collection.**

   Reasons for Policy:

   1. Past experience has shown that the genetic selection of brood stock held at a hatchery for ease of handling, high egg production and early maturity has often resulted in offspring ill suited to natural conditions and hence productive fisheries.

   2. Genetic variability is vital to the survival of healthy fish stocks and selection of brood stock should represent the genetic diversity of the population.

3. Some instances do occur where the continuous maintenance of brood stock is essential but in these cases extreme caution should be exercised to maintain variability and natural diversity within the gene pool.

3. It is the policy of the Ministry that approval of the Federal/Provincial Transplant Committee must be obtained before any transplant or introduction of fish or aquatic invertebrates is undertaken by Ministry staff.

Reasons for Policy:

1. Transplants or introductions of live fish, fish eggs or aquatic invertebrates without the express written permission of the Minister of the Department of Fisheries and Oceans is prohibited under the Fisheries Act (Canada).

2. Fisheries Officers and, therefore, many employees of the Department of Fisheries and Oceans and the Ministry of Environment are exempt from these prohibitions but not from the policy.

3. It is essential to the health and continued productivity of our native fish populations that strict control and serious assessment of all possible consequences be exercised in all cases of proposed introductions.

4. A Federal/Provincial Technical Committee has been established which meets regularly to consider all proposals for transplants and introductions and is empowered to approve or reject applications based on consideration of:

   a. disease transmission

   b. genetic implications

   c. ecological impacts

   since these represent general hazards to the well being of native fish populations.

4. It is the policy of the Ministry to manage the freshwater fishery resource primarily to provide recreational opportunities for anglers and non-consumptive users, but also to recognize the need for allocation of some fish to those in need of sustenance and to consider the potential economic value of the commercial harvesting of some species where minimal interference with recreational use is assured.

Reasons for Policy:

1. To define the Ministry attitude toward allocation of the resource.

2. To provide guidance to Fisheries staff in assessing requests for sustenance or commercial fisheries.

5. It is the policy of the Ministry to provide a wide variety of angling opportunities for residents, non-resident and non-resident aliens alike, but in situations where the Director of the Fish and Wildlife Branch has determined that the demand for angling exceeds the biological or aesthetic

capability of the resource, angling privileges will be allocated such that priority of use is determined by residency status in that residents of British Columbia are given first priority, other residents of Canada second priority, and non-residents of Canada third priority.

Reasons for Policy:

1. To state clearly the position of the Ministry on the allocation of angling opportunity in British Columbia.

2. General provincial revenue provides the majority of funding for the management of British Columbia's freshwater fishery. The resource is limited and where decisions must be made, the priority basis will be residents first, non-residents second and non-resident aliens third.

6. **It is the policy of the Ministry to oppose fishing contests where commercial and competitive aspects are emphasized to the detriment of the fisheries resource or the fishing experience.**

Reasons for Policy:

The Fish and Wildlife Branch is responsible for the management, protection and enhancement of the freshwater fishery resources of British Columbia. A major goal of the Branch is to satisfy human desires for recreational fishing as a means of close personal involvement with fish in their natural habitat. Essential to this goal is the development and encouragement of angling ethics and appreciation of sportsmanlike conduct amongst anglers.

Commercial fishing contests are not always compatible with this goal, especially when associated with species or stocks whose numbers are relatively scarce. Some contests tend to influence angler attitudes and behaviour; namely, increased angler effort, changed angler distribution, encouraged fish kill and erosion of angler ethics and sportsmanship. The Branch will maintain the position that competition for commercial gain should not be a part of angling in British Columbia.

Angling Licence Sales In British Columbia

	1970	1975	1980	Change 70/80
Resident	213,255	279,802	341,125	+60%
Non-Resident	98,329	88,299	109,161	+11%
	311,584	368,101	450,286	+44.5%

Angler Days In British Columbia

	1970	1975	1980	Change 70/80
Resident	1,730,600	4,043,800	4,551,400	+67%
Non-Resident	477,800	526,700	662,200	+39%
	3,208,400	4,570,500	5,213,600	+62%

Catch Per Angler Day

	1970	1975	1980	Change 70/80
Resident	2.4	1.7	1.5	-0.9
Non-Resident	4.6	2.0	1.8	-2.8
	2.7	1.7	1.5	-1.2

Direct Expenditures of Anglers ($)

	1970	1975	1980	Change 70/80
Resident	41,022,000	61,796,000	68,618,000	+40%
Non-Resident	11,827,000	23,136,000	27,684,000	+57%
	52,849,000	84,932,000	96,302,000	+45%

Regional Resource Management Boundaries,
Ministry of Environment, British Columbia

Yukon

Howard Paish
Policy Advisor, Department of Renewable Resources

All fisheries in Yukon are managed by the Department of Fisheries and Oceans as a part of the Fraser River-Northern B.C.-Yukon Area of the Pacific Region of the Department of Fisheries and Oceans.

The freshwater fishery in Yukon is the only freshwater fishery component of the Pacific Region's management responsibilities, which are understandably dominated by salmon and tidal fisheries.

The Government of Yukon is responsible for the sale of licences and all matters relating to licencing and it is for that reason that the Territorial Government has played a major role in the conduct of the National Sport Fishing Surveys.

It is a clear objective of the Government of Yukon to assume responsibility for the freshwater sport fishery in Yukon as soon as possible, and maintain the same kind of relationship with respect to the sport fishery as that maintained by British Columbia for the balance of the Pacific Region.

For practical purposes, it may be appropriate to incorporate the very small freshwater commercial fishery in that transfer of responsibility, and there would be the same kind of parallel responsibilities for the salmon sport fishery as that which holds for non-tidal waters in British Columbia.

It is clearly understood that with such an arrangement the status of Yukon would be no different from that of most of the provinces. The Fisheries Act would be the statutory instrument for management and would apply to regulation of the freshwater fishery and to habitat matters.

Several requests have been made to the present and former Ministers of Fisheries and Oceans to support such a transfer of responsibility, and there seems to be no major disagreement in principle although the Ministers seem reluctant to make any early moves. A coordinating committee between the Fisheries and Oceans and the Government of Yukon Department of Renewable Resources will be re-activated shortly to deal with matters of mutual concern with respect initially to a shared management of the fishery, and ultimately to effect a transition of responsibility. Such a committee worked very well during the conduct of a policy-oriented assessment of sport fishing in Yukon in 1980 and 1981.

The request for transfer of responsibility at this time is particularly appropriate since land claims are near settlement and an innovative one-government approach to renewable Resource Planning and Management is a key part of that settlement.

The balance of my comments are based on a document that has been circulated to you, The Yukon Sport Fishery: A Policy Oriented Assessment of Sport Fishing in Yukon, Summary.

That summary document sets out the results of a program carried out in 1980 and 1981 jointly by the Yukon Government Departments of Renewable Resources and Tourism and by the Federal Departments of Fisheries and Oceans and Indian and Northern Affairs.

The work was carried out as a result of observations made by myself about the manner in which land allocations were setting fisheries policy in Yukon by default, and there was really insufficient good information on fisheries to assist other resource managers in making their decisions, regardless of the need for good information on the fisheries by DFO itself.

The study was carried out by Howard Paish and Associates Ltd., and a key part of it, with which a number of you are familiar, was consultation with the provinces to find out how they would consider setting up a sport fish management program virtually from scratch if they had the choice. You will see a number of your recommendations in this document.

The results of the 1980 national Sportfishing Survey were not available at the time the report was prepared, however, the conclusions we reached were very close to the results of that survey which are now just being circulated.

In 1980 the Yukon sport fishery provided some 170,000 man days of angling for almost 20,000 resident and visitor anglers. These anglers caught and kept about 235,000 fish, about 50 percent of which would be Arctic grayling, and by weight over 80 percent would be lake trout.

The angling took place on some 277 lakes, about one-third of which are accessible by some sort of road including four-wheel drive. Some 70 percent of actual lake surfaces in Yukon are accessible through some sort of road access. The remaining angling took place along rivers and streams, a very small portion of which are accessible by road.

About 8,500 visitors bought angling licences in 1980 although less than 600 of them came to Yukon specifically to participate in a fishing lodge operation.

A 1977 survey of Yukoners' outdoor recreation activity shows that 70 percent of the population fish at some time during the year, well ahead of such popular activities as camping, hunting, recreational boating, cross-country skiing and snowmobiling.

Clearly, sport fishing is a key activity to Yukon.

I shall not try to detail all of the points in the document, however two issues deserve particular attention and they will come as little surprise to most of you, particularly with respect to the northern parts of your provinces.

Yukon lakes are not very productive. Lakes in southern Canada are anywhere from 5 to 10 times more productive than most Yukon lakes.

As a result of this, native fish in Yukon waters grow very slowly and their reproductive rates are low. Lake trout do not reach spawning maturity until they are 8 to 10 years of age and they only spawn every second or third year.

Ryder's Morpho-edaphic index was used to calculate a very, very broad estimate of productivity for a number of Yukon lakes. The average turned out to be 3.4 pounds per acre (more refined work during the past 2 years has confirmed that figure).

This leads us to our second point. The best available information, including estimated productivity on a territory-wide basis, was applied to surveys conducted in 1971 and 1975 and it becomes fairly clear that between 1970 and 1975 the number of anglers and total angler effort increased by just over 30%, while during the same period, the total catch of fish of the 3 main species Arctic grayling, lake trout and northern pike, decreased by 28%.

The 1980 survey results support this decline although it may be confused slightly by a possible growing trend towards catch and release fisheries.

It becomes quite clear that possible over-use of the fishery rather than deterioration of an almost pristine habitat base was the key issue that had to be addressed first. The proposed management program set out on page 16 of the summary document identified proposed policy goals and objectives, and the work programme required to meet those goals and objectives.

The report pinpointed some of the problems alluded to already, such as the low priority given the freshwater fishery because of the dominant interest in salmon by the Pacific Region. A recommendation was made that responsibility for the fishery be transferred to Government of Yukon over a 4 year period. This took into account the fact that Government of Yukon already had a good infra-structure in place for recreational resource management, including responsibility for wildlife and parks and a well-distributed conservation officer service.

The overall conclusions and recommendations were accepted in principle by the agencies that participated in the assignment; DFO, DIAND and Yukon Departments of Renewable Resources and Tourism, all of whom actively participated in the steering committee that approved the final report.

Unfortunately the report didn't do a great deal to change the priorities of DFO on a regional level. In spite of that, a significant amount of work has in fact been carried out. For example in 1983 alone, some 52 people were working on DFO projects in Yukon on budgets other than DFO's own budget. About one third of these people were working on inland sport fisheries programmes financed by Yukon River Basin Study and through the various C.E.I.C. and Career Opportunity programmes.

Unfortunately that approach to carrying out serious research and management programmes means that too often your best technical people are spending most of their time as administrators rather than getting on with the job that they understand best.

Since the completion of the report however, the following achievements have already been made:

- Specific Morpho-edaphic Index Information has been obtained for 67 lakes, and research has been carried out to determine the applicability of using the MEI as a basis for management.

- Species composition data has been obtained for 10 lakes.

- Based on the above information, lake trout quotas have been established for fly-in sport fishing lakes, and have led to a policy that emphasizes low capital costs and mobility to ensure low levels of exploitation.

- Quotas have been given to operators of sport fishing operations. These are short-term and subject to negotiation upwards or downwards from 50% of the total allowable catch. Fifty percent is automatically set aside for resident use, and this could be greater to reflect the policy of both the Federal and Yukon Governments to give first priority to resident anglers.

- A successful high-profile low cost pothole lake stocking programme for rainbow trout has provided fisheries close to communities. This has proven popular in its own right and has also assisted in diverting effort to some extent from natural stocks.

- The most immediate regulatory measure that has been taken has been a 40% reduction in angler limits for lake trout from 5 to 3 fish per day, and protection for trophy trout by a 1 fish only limit for trout over 80 cm in length. This has been matched by a 40% reduction in lake trout quotas for commercial fisheries.

It can be seen that the emphasis to date has been on the actual resource itself and the next important step has to be to bring that "fish" information in step with "angler" information. Clearly the resource base has to come first, but sound management decisions can only be reached on the basis of <u>both</u> the biological and user information.

- The first important step must be an analysis of the 1980 sport fishing survey information on a site-specific basis. This can then be further cross-checked through a "gross" approach to angler use and effort - not as a traditional creel census, but rather an attempt to use the same methods, such as fly-over, observations at set periods at popular fishing areas, that have already proven their worth in connection with marine fisheries and freshwater fisheries elsewhere. The focus is on angling effort as opposed to the taking of biological samples.

- On the basis of the above user information, it is possible then to refine census techniques that are applicable to Yukon including the design of future national surveys.

This in turn will lead to the achieving of some further future objectives which include:

- The development of an allocation formula on a lake-specific basis which ensures that total harvests fall within the capabilities of lakes to produce fish.

- Development of a better catch monitoring system which must be intensive since so many of Yukon's lakes are small, unproductive and extremely vulnerable to overfishing.

- Continuation of inventory, and expansion of the biological data base. For example, very little is known about juvenile lake trout.

- Incorporation of mutual education programme for both fisheries managers and anglers.

- The development of cost effective overall recreation resource management programmes that incorporate angling within the total complex of aquatic based outdoor recreation.

- A cautious approach to possible enhancement recognizing that the real priority at present is to focus on making the best use of the existing, near pristine natural habitat. We do not want to see enhancement being little more than a "bandaid" substitute for poor management.

- Efforts will be made to promote the use of native species that are currently under-utilized such as whitefish and burbot.

In summary, the current management actions have all been taken and proposed with the knowledge that the information base is frequently far from perfect. Recent strategy has been developed on the basis of the best available information, recognizing the short-comings of some of the scientific data and frequently based on little more than good local knowledge and "gut feelings". But this approach has been absolutely necessary given the current low levels of funding by DFO for an already declining resource.

We listened carefully to the advice that you gave three years ago, and do not want to be in the position a few years from now, of trying to enhance and recreate a fishery that can remain one of the best on the continent if we give it the level of management it deserves - now.

You will note that I have concentrated on the freshwater fishery. However, the salmon sport fishery is of growing importance to Yukoners. It takes place primarily on trans-boundary streams and consequently will be influenced by the international negotiations which I am sure you will hear more about during this conference.

It is worth noting that Yukon is the only jurisdiction in Canada where it is possible to catch sockeye salmon in the freshwater sport fishery. The other, perhaps more important species of interest, is the large river chinook.

These might not be as silver-bright as those sought by some of the purists on the B.C. coast, but they contribute significantly to the angling enjoyment of Yukoners.

I don't have to belabour the fact that while the vast majority of productive habitat on the trans-boundary rivers lies in Canada, about 90% - by the same token the vast majority of the fish are taken by Alaska.

Yukon is particularly disturbed at the prospect of these northern fish catches being used as bargaining credits in international negotiations to help bail out poor management decisions made elsewhere in the Pacific fishery. It

may well be that quality and cost considerations with respect to the commercial use of the salmon may make it appropriate to use some fish as bargaining credits provided a totally adequate escapement is permitted to cover spawning, the native food fishery and the growing sport fishery, and further that benefits from any credits that accrue to Canada must be used for a far better level of sport fish management for the freshwater species in Yukon.

Northwest Territories

Charles Livingston
Head of Operations, Tourism and Parks
Department of Economic Development and Tourism

I am here as a representative of the Government of the Northwest Territories' Tourism Division. Our division is keenly interested in the health of the sport fish populations and the regulations associated with the protection and management of the sports fish populations.

The principal cause of the birth of tourism in the Northwest Territories was sports fishing.

Our fishery is managed primarily by the federal Department of Fisheries and Oceans. Fish are taken for domestic purposes, for commercial purposes, for use by lodges and outfitters and for "unorganized sport fishing". No firm policies are now in place to guide the allocation between different user groups. Rather there are discussions on a "case by case" basis between representatives of the Government of the Northwest Territories and the Department of Fisheries and Oceans and with representatives of the major user groups.

It is noted that priority is always awarded to domestic use.

In addition to the question of allocation of fish stocks, there is a growing issue associated with "ownership" of fish stocks. This issue has many dimensions. Who should allocate the sustainable harvest between competing user groups? Who should establish the extent of the sustainable harvest? Who should have the right to develop "fly-in" sport fishing operations? To a large extent this particular issue will be resolved through the native peoples land settlement process and our legislative assembly.

It takes a very long time for a lake in the Northwest Territories to produce a trophy fish, 20, 25 years for a char, 15 to 20 years for a lake trout. Our lakes and rivers are not very productive by southern standards and therefore this makes our fish stocks very sensitive to external pressures.

Commercial and domestic netting has had a severe impact on the quality of our sport fishery. In places scattered right across the Northwest Territories, even with our small population, certain fish populations have been badly upset by too much sport fishing.

Studies indicating the relative economic return for fish taken in various ways, e.g. value to the economy of the lodge, compared to a commercial fishery, help to rationalize the allocation process. Involving representatives of the various user groups in working through the allocation process also helps, as

does actively involving local people in collecting and interpreting data associated with fish populations.

Most of our lodges promote "barbless" fishing, and several lodges provide a prize to the fisherman who threw back the largest fish during the season. In addition, several of our lodges provide their patrons with a quantity of pre-packaged commercially caught fish (from other water bodies) to maintain their own fish stocks. I am aware of several natives communities that have requested a ban on domestic and commercial netting to ensure sustainable populations on local rivers for their sports fishing and lodge activities.

We are now witnessing a transition in our lodge industry. In the 1960's, virtually all of our lodges were owned, managed and operated by non-residents. They focused on trophy wilderness fishing. The lodge industry was the mainstay of our tourism industry, and yet it created few jobs in the north. It didn't leave many dollars in the Northwest Territories either. This caused much antagonism in some of our communities towards the non-resident owner/managers who used N.W.T. natural resources, and left little behind; and to the visitors themselves who actually took the fish stocks for sport purposes.

The situation is now changing. More N.W.T. residents are developing their own operations. Some businesses are catering to families and the more casual fisherman in response to changes in the marketplace. And some of the non-resident owners made real efforts to hire locally, and buy locally.

Trophy lodges are no longer the mainstay of our tourism industry, although they are a very important component. Sports fishing though, is an important element of most of our visitor's vacation in the Northwest Territories. Fishing is no longer the prime purpose for the visit for most of our visitors, but most of the visitors fish during part of their visit.

Most of the new lodge and outfitter establishments are now being developed near our communities. The length of stay is much shorter and they cater to Northwest Territories residents and visitors alike. They offer other activities in addition to fishing, such as hiking, photography, community visits. They stress local Native guides as a selling point, meet a Native person. And the facilities are not nearly so fancy. Fishing and fun, not trophy fishing, is the product.

As to the future of the sport fishing industry in the Northwest Territories going into the 1990's, we foresee it maintaining more or less its present level. Any development will be on the medium sized lakes. In all probability, these will be developed by N.W.T. residents or the local indigenous organizations. And as previously mentioned, the visitors are looking for other activities as well as fishing when they come up to visit the N.W.T.

Intergovernmental

Canadian Sport Fisheries Goals and Programs
Draft for Intergovernment/Industry Consideration

Messrs. Holder, Hooper, Thomas, Tuomi

This document was drafted by a federal-provincial pre-Conference planning committee in consultation with all federal, provincial and territorial sport fisheries licensing and management agencies. It has no official governmental status until, and to the extent, it is considered and accepted by the governments involved following its review at the 1984 Canadian Sport Fisheries Conference.

The purpose of the paper is to

Look ahead to the 1990s, and outline goals and programs for the conservation, use and development of Canada's sport fisheries so that they will make their maximum contribution to human welfare and national well-being.

The paper is based on the following premises

- In order to focus on the future, no mention is made of ongoing fisheries programs and management concerns and activities unless they relate directly to goals, issues, strategies and programs described in the "spreadsheet".

- This paper is intended to provide a framework for consultations at the 1984 Canadian Sport Fisheries Conference aimed at the formulation of an inter-governmental/industry consensus on Canadian sport fisheries goals and programs for the 1990s.

- After taking into account Conference conclusions and recommendations, these goals and programs will then be subject to the consideration of all sport fisheries agencies and governments.

- The framework of goals and programs outlined here is neither final nor definitive. Some problems may be insoluble. Most goals are elusive. But based on the surprising success of earlier efforts, all of Canada's sport fisheries agencies and interests are now ready to embark on the next stage of collective endeavour.

Lessons learned since 1970

Federal and provincial sport fisheries agency representatives met in 1970 to explore the development of data on Canada's sport fisheries. The most obvious result was the co-operative planning and conduct of the nationally-coordinated Surveys of Sportfishing in Canada which are carried out every five years. But equally important, agreement was reached on key goals and means, priorities were established, and more generally, lessons were learned and progress has been made since-

- Improved management is the primary goal for fisheries managers and agencies.

- Canadians generally, and governments in particular, need progressively increasing information respecting the dimensions, variety, role and the potential of Canada's sport fisheries for enabling both the enjoyment and the generation of wealth.

- Canada's 14 sport fisheries licensing and management agencies have learned that through consultation and cooperation they can accomplish collectively what no one agency or one level of government can do by itself.

- The Department of Fisheries and Oceans (DFO) has national leadership and program responsibilities respecting Canada's sport fisheries: this was pointed out by the provincial representatives in 1970 when they offered provincial support for such federal leadership and program performance.

- DFO accepted this leadership role on a cost-shared basis with the provinces when it played a lead role in the cooperatively planned and nationally-coordinated 1975 and 1980 Surveys of Sportfishing in Canada. Other DFO national "staff" programs followed, e.g. the "MICS" System (Management Information Clearinghouse Service) whereby a national reference centre was established and relevant management information was regularly supplied to all of Canada's sport fisheries agencies.

- Next to national data development, second priority was assigned in 1970 to research on the economic valuation of sport fisheries so competing claims for the use of the resource and its habitat can be compared on a common and consistent basis.

- The need for comprehensive sport fish industry communications, understanding and coordination was recognized. This led to the inception of the Canadian Sport Fisheries Conferences, which in 1976 were enlarged in scope to include all industry sectors.

"Getting ready for the 1990's"

Significant progress has been made since 1970 - notably, in the way of nationally-coordinated data development, research on fisheries economic valuation, and intergovernmental and industry consultative processes. But there are old as well as new problems and opportunities to be addressed.

- Neither the public nor governments have as yet been adequately informed, or as yet really understand, the dimensions, role or potential of Canada's sport fisheries: while this is part reflects the slowness with which quinquennial survey results have been forthcoming, there are other reasons.

- By all normal yardsticks, Canada's sport fishery is an industry in its own right:

  - Over six million "customers" fish every year, 5 million Canadians and a million anglers from other countries.

- Anglers spend and invest over $2 billion dollars annually across Canada.

- The $300 million spent by non-Canadian anglers in 1980 was 9 percent of Canada's total foreign earnings from tourism in that year.

- The fish anglers caught and kept in 1980 represented almost 40 per cent by weight of the total of all the sport and commercial finfish caught and consumed in Canada (about 70% of the commercial catch is exported).

- Anglers do not take a back seat to anyone in paying for the right to fish: in 1975 anglers landed 8% by weight of the combined sport/ commercial catch but they paid over 70% of all fishing licence fees.

- In 1980, the sportfishing gear and boats (used 46% of the time for sportfishing) owned by Canadians had an estimated market value of $4.3 billion. Despite all this, sportfishing has not yet been either correspondingly conceptualized or really perceived as an industry - particularly by governments.

. Economics continues to be the Achilles heel of the sport fisheries. Both economists, and others, still argue about the economic value of sport fisheries. Calling the sport fisheries an industry and making estimates of the value of its output is disputed. And all too often, almost anyone, including government agencies, can cast serious doubt, if not successfully challenge and/or delay, major programs or decisions favourable to the sport fisheries.

. Canada's sport fisheries potential is huge but it is in danger. Canada, with its small population, has up to a quarter of the world's entire freshwater area. Canada is the major home of some of the world's most sought-after gamefish, like the Atlantic and Pacific salmons, trophy lake trout, walleye and Arctic grayling. Much of this opportunity is made attractive because it is natural and often in wilderness areas - a siting for sportfishing that is both rare and disappearing elsewhere. In world tourism markets, Canada still enjoys a sport fisheries image based on the above advantages that has few if any equals. But neither the reality nor the image can be maintained if prevailing trends continue.

. There are many competing and conflicting demands on fisheries and their habitat almost everywhere. But acid rain threatens the very existence of fisheries in a significant percentage of Canada's freshwaters. Nothing short of the best collective effort of all fisheries agencies and interests is required to bring this threat into perspective and thereby develop the economic case required to justify the cost of control measures to stop and mitigate acidic emissions regardless of source.

. Every Canadian has a stake in the welfare of the sport fisheries, at one or more levels. At the federal level, every Canadian shares in the ownership of the wealth and the potential of Canada's ocean fisheries. All provincial residents share likewise in their own province's fisheries,as do territorial residents in a related way. Riparian owners in Quebec and New Brunswick have an even more direct interest. And where

their property rights are established, Indians and Inuit attach values to fisheries that go well beyond ownership as such. Going one step further, the welfare of Canada's treasure trove of freshwater fisheries ultimately has to be a matter of considerable interest, not only to the million anglers from other countries who fish in Canada every year, but to all succeeding visiting generation, everywhere, who will suffer if the opportunity to come and fish in Canada is jeopardized because the challenges to Canada's sport fisheries future are insufficiently understood and addressed now.

And finally, the five million Canadians who fish every year have a dual interest - and responsibility - both as users and owners.

Strategies for the 1990s

- This paper, and the enclosed "spreadsheet" address the key requirement by identifying and opening up for consideration both the overall goal of "best use" and ten related sub-goal and program areas.

- These goals and programs are being articulated and categorized in this way for the first time for Canada's entire $2 billion a year sport fisheries industry. Because this involves the primary interests and activities of the fisheries agencies of 13 separate governments, these goals and programs are proposed for inter-governmental/industry consideration and concurrence only to the extent that a consensus materializes. Accordingly, this paper is an exploratory starting point for the beneficial shaping of the fisheries future for the 1990s: it is not a plan, let alone a blueprint.

- Program needs are divided into two groups. First, those which will by their nature be best considered and acted upon collectively: either through cooperative joint programs (like the quinquennial surveys); cooperatively planned and coordinated but independently conducted complementary programs; programs conducted or services provided by a central or lead agency, or conceivably through non-government means in some matters, i.e. there is no fixed pattern or formula for either consideration or action. Second, there are operational programs which can be considered and independently undertaken by any or all agencies.

- Experience gained since 1970 shows that inter-governmental cooperation is possible, practical and cost-effective: the key is continuing inter-governmental/consultation, cooperation and consensus on matters of collective interest and concern.

- Neither unanimous agreement nor a consensus can be expected regarding all the goals and programs detailed in the spreadsheet. But if agreement is reached on enough of them, plus agreement on how and when to deal with the others, then an inter-governmental/industry foundation can be established upon which to build for the 1990s.

- It is hoped that any such agreement relating to this framework will go beyond discussion so that the 1984 conference can actually serve as the launching pad for charting the future of Canada's sport fisheries industry into the 1990s. This, among other things, will require a consensus on priorities, means and methods.

Program Priorities

1. A sport fisheries unit with commensurate status and capabilities should be established within Fisheries and Oceans to publicly demonstrate the Department's commitment to providing national sport fisheries leadership and for carrying out of its intergovernment/industry programs and activities on an organized and ongoing basis.

2. One of the first commitments to the 1990s of the 1984 Conference, and a primary responsibility of the above unit, is to schedule and organize the next biennial CFS Conference at which the results expected from the 1984 Conference will be reviewed.

3. In a similar vein, and starting as soon as possible, inter-governmental consultation should follow and arrangements should be made for annual meetings of all the directors of sport fisheries in Canada. Besides providing an ongoing means for intergovernmental consultation and program consideration, this forum could also provide guidance on CSF Conference reports and arrangements.

4. An immediate priority is the cooperative planning and conduct of the 1985 Survey of Sportfishing in Canada.

5. An inter-governmental committee should be established to consider choices and make recommendations regarding the establishment and operation of a Canadian Recreational Fisheries Development Fund.

6. A federal/provincial/industry task force, or work group, should be established to consult with all sport fisheries agencies respecting the nature, the requirements and the feasibility of development of a sport fisheries tourism development and marketing strategy for Canada. Reports on this should be made to both the first meeting of sport fisheries directors and to the next CSF Conference.

7. Though other means are already in process, more detailed reports and recommendations should be made to the first meeting of directors of sport fisheries regarding habitat matters and scientific research directions and needs.

8. A related priority is the re-establishment of a Canadian sport fisheries reference centre and resumption (as recommended at the 1981 Conference) of the "MICS" System (Management Information Clearinghouse Service) to serve not only cooperating sport fisheries agencies in Canada and elsewhere, but also key sectors of the sport fish industry, - e.g. organized anglers, business and related economic development interests.

9. An international sport fisheries economic evaluation symposium (like the one in 1965) should be convened in 1985 to clarify and resolve remaining questions regarding the valuation of sport fisheries and what is meant and covered in "best use".

Goals & P s Spreadsheet Jan. 31/84	GOALS A	ISSUES B	STRATEGIES C	COLLECTIVE PROGRAMS D	AGENCY PROGRAMS E
Overall 1	"Best use"	What is the best use?	Define best use in terms of goals. Identify and categorize best use components and consequences in operational terms.	Formulate goals and programs for Canada at CSF Conferences, categorize and quantify goals in operational terms, identify areas of consensus on "best use" steps, programs, standards & reporting.	Define best use goals for agency. Implement, assess, revise and report accordingly. Develop CSF Conf. equivalent in each province, territory, & for ocean waters for best use consultation & planning.
Conservation 2	Maintain, protect and restore fisheries and their potential wherever possible and justified.	Acid rain. Excessive catches. Habitat abuse & irreversibilities. What is "best use" potential? Public awareness of conservation needs.	Identify and quantify both fisheries potential & threats so values at stake can be understood and dealt with.	Develop agreement on Canadian habitat statutes and policy so that they are understood and accepted. Formulate coordinated conservation "early-warning" & response systems. Identify, secure and dedicate key habitat areas.	Practice resource & habitat inventorying, classification and monitoring. Define potential at stake. Enforce habitat regulations. Educate users and public. Enroll public and private sector support & activity.
Allocation 3	Equitable consideration of both owner and user interests. Due consideration of regional dependency and socio-economic impacts. Public understanding of "best use" goals, choices and decision processes.	Equity for whom and how? Socioeconomic impacts of change. How do you compare sport, commercial, Native & subsistence uses on a common best use basis in both common and private property fisheries?	Develop theoretical and operational criteria for "best use" allocations and as a guide for fisheries planning, management and development. Ensure adequate representation of public interest and user groups in consultations.	Develop & maintain measures of fisheries potential to guide in allocations & to protect Canada's fisheries interests, specifically including international negotiations and agreements.	Explicit weighing and formulation of allocation choices and consequences. Economic cost-accounting covering all program inputs and socio-economic outputs. Better public reporting on fisheries input-output performance.
Development 4	Develop existing potential where justified. Identify and protect future options.	For what markets, for whose benefit? Criteria for ranking choices. Funding justification and returns. Inter-jurisdictional arrangements.	Identify, categorize, quantify and rank all potential development and diversification opportunities, including inter-agency agreement requirements.	Develop criteria to identify, priorize and select develop. opps. & payback means. Establish Canadian Rec. Fisheries Development Fund (CRFD Fund). Develop machinery and guidelines for use of CRFD Fund, including for f-p development projects & programs.	Identify markets and priorize development opportunities and projects. Explore & undertake development programs based on inter-agency agreements, public user, and private interest groups support and participation.
Tourism 5	Promote and develop tourism where pay-off justifies and also benefits local residents and resident anglers.	Benefits not being realized in relation to Canada's huge tourism potential. Tourist angling not liked by all residents and resident users.	Determine recreational tourism potential. Identify means and methods to develop that potential. Identify and priorize rec. fish tourism opportunities with least regional and other user conflicts.	Determine Canada's recreational fisheries markets. Develop Canadian recreational fisheries marketing, management and development strategy to realize on that potential.	Identify tourism markets & opp. Adopt measures to benefit tourism industry, the resource, owners and/or beneficiaries. Cooperate in rec. fish marketing program promotions and development.
Science 6	Use of all man's knowledge and innovation to produce optimum fisheries crops and other outputs.	Information exchange and idea formulation inadequate. Inadequate program funding. Loss of valuable strains and species. Abundance of nongame-non forage species. Priorities for research and applied research.	Improve conference/research travel. Do growth & longevity mngt. as well as pop manip. Maintain val. strains, unique species, & develop disease free fish. Focus research on impor. sup./dem problems. Establish practical research units.	Travel funds for mgrs. & researchers. Regional repository for disease free special strains and unique SPP. Aquaculture pure and applied research facility required. Interagency liaison required to guide Canadian regional research.	Develop forums for info. and idea exchanges and for co-op. ventures. Aquac. repositories for existing & improved strains. More research on stocks, productivity & potential. Improve non-game species control.
Economics 7	Clarify and fully legitimatize the economics of the recreational fisheries, their role and potential. Develop economic model of the industry specifying basis for its economic viability.	Validity of recreational fisheries economic theory and estimates still questioned & too easily challenged. Lack of sport/commercial comparability. Economic jargon & debates confusing.	Remove the remaining doubts re the economic valuation of sport fisheries as the *key* to the full recognition of the sport fisheries and has top priority. Demonstrate rec. fish superior econ. payoffs over alternatives.	Continued coopertion and leadership in recreational fisheries economic research studies. Conduct & publication of empirical valuation studies and reports. Inform govts. users & public accordingly.	Cooperate in and contribute to nat-coordinated research & studies. Develop and apply standardized economic management approaches and systems. Report to publics on valuations.
Statistics 8	Improve and expand nationally-coordinated Canadian sport fisheries statistics, systems and coverage.	Slow quinquennial survey results. Ad hoc financing of surveys. Inadequate publication, recognition & dissemination of data and analyses.	Continue to improve and develop the nationally-coordinated survey and statistics on the whole industry.	Continue quinquennial surveys. Better national leadership and program performance. Upgrade planning, organization, funding, reporting & public understanding of survey results.	Improve angler licensing coverage. Improve angler data systems & access. Improve management reporting on both input and output, on standardized basis. Better industry concepts & reports on industry role and performance.
Funding 9	Develop funding commensurate with the realizable potential of Canada's sport fisheries.	Incremental govt. budgeting inadequate. "Best use" future to justify major funding increases not yet identified for consideration. Many sources of funding not yet explored.	Justify and increase funding from both existing and new sources.	Quantify future funding needs, sources and short-falls. Assess arm's-length co-op/&or private/public investments in development. Develop all publ/priv sector possibilities for CRFD Fund.	Higher fees and/or surtaxes on licences. Voluntary donations. Taxes on goods & services. Support NGO efforts & partnerships. Set-up agency CRFD Funds.
Communi-cations 10	Better inform and educate public concerning needs of fish and values of fisheries. Clear concept needed of overall sport fish industry.	Importance, role and potential of Canada's sport fisheries not adequately understood, conveyed & communicated either to govts. or other publics.	Give the public and the industry more and better information regarding the sport fisheries' importance, role and potential.	Re-establish Can. sport fisheries ref. center and "MICS" program within Canada and internationally. Develop rec. fish info. & public communication program exploring & using all media means.	Comprehensive agency operational reports on problems, opportunities, output, comparative performance, outlook and plans for sport fisheries. Convene regular government/industry conferences.
Coordination 11	Improve inter-government and industry consultation, cooperation and coordination.	No organizational foundation for continuing government or industry development and coordination yet established. Many challenges beyond any one agency's capacity to address, let alone resolve.	Identify areas and means where working together will efficiently and effectively serve the public interest.	Organize CSF Conferences on an ongoing biennial basis. Start annual mtgs. of Directors of fisheries, with approp. backup support. Foster coord. approaches in Can. & elsewhere to key rec. fish matters as recommended at 1980 FAO Conf.	Provide information & reports to Canadian information & reference center. Use standardized input-output reporting standards & performance evaluations.

Discussion

Archie Tuomi: Conflicting opinions have been expressed by my colleagues on the intergovernmental paper and particularly the spreadsheet. There is also a committee working on a conference summary. Regarding the spreadsheet, the most impressive thing about it as far as I am concerned, is that it points out the complexity of the "big picture". In short, it puts into a spreadsheet perspective the overall picture of what we have to contend with. I'm not sure that a group like this can do anything other than look at it with caution. So, I would ask my able colleagues to give their views on this matter.

Ron Thomas: The spreadsheet covers the world but I think we have to decide what it is we want to do, and secondly, we have to decide what vehicle we need, how it's going to be done. It obviously has to be done collectively between management agencies and all other groups; the NGO's, whatever they may be. There has been a suggestion that we should try by some grouping of people to develop a national policy statement on fisheries which is fine except I'm not sure what would happen to it. There is a commercial fishery policy statement written in 1976 and I refer to it very seldom. But the fact is that from a commercial fishery allocation point of view it is a point from which to deviate and I think that maybe that is one of the things we are looking for. What was going to be done was a presentation of the draft sport fishery goals and a critique of them. But all programs are not perfect and I guess I'm not sure that any of us are ready to do that.

Bill Hooper: Referring to the spreadsheet, I think it is a start. It's an inventory of the components that are involved in sport fisheries. Probably it's not a complete inventory, but it sure covers a lot. It needs constructive criticism.

When you look at it, what would you have done faced with the same task? The drafting committee would like to hear from you on your approach. We have to understand the sport fishing universe, and we have to move forward. There has to be a place to start and maybe this is it, maybe it isn't. But if it isn't, what is? We're a fragmented society with an overall goal of "best use" and let's keep that in mind. It is important to get on with the job and try to reach out and grab this common denominator of best use.

Doug Brown: I think we have to be clear as to what the objective of such a statement is and what kind of form we would like to see it leave this conference. The policy for wildlife was developed by the Federal/Provincial/Territorial Conference of Wildlife Directors, moved up after several years to the Minister's level, and finally to the Canadian Council of Resource and Environment Ministers. That is one way to go. I guess the idea was that some kind of statement was worthwhile. If this is what the sports fishing industry would like, to have something that all governments can stand by, that's fine. But I think you have to consider what is the future of any document that is produced here.

Dick Roberts: Reference has been made to the document entitled Guidelines for Wildlife Policy in Canada. It is an interesting document, but I would agree that it is a bit on the motherhood side. I think that given the sport fisheries context, we can come up with something more specific than that. But I'm not sure that we can come up with that kind of document at this conference. What I would like to suggest is that we consider setting in train a process to develop

a document like this that would engage the government and the non-governmental organizations. And that we look to having something developed fairly quickly, that is within a year. The wildlife policy thing took 3 years to prepare. I think that we are well enough advanced to come up with something more specific, a lot faster. I think that we could even look towards another meeting in November of this year and a working group that would develop a document. What I am talking about, from the point of view of output of this conference, is a document that sets out in fairly general terms the recognition of the importance of the sport fishery, its legitimacy, the need for specific allocation policy, the need for better consultation with user groups, the need for more effective federal/provincial and federal/territorial relations. Then, on the basis of this, we have set up a process to develop guidelines for sportfish policy in Canada that will be considered by a conference in say, November. So, that is off the top of my head but that is one suggestion. I haven't had a chance to consult on this but I would like to hear the reaction of this group.

Art Holder: You will recall, Archie, when you first proposed this conference, I asked just what the objective of this conference really was. I think we have now reached the point where we have to determine just exactly what that objective is. Despite my exchange this morning on constitutional issues, I share with Ron the idea that we ought to determine what it is that is really wrong, if you will, with sport fishing and fish stocks. I am inclined to think that we have to sort out issues in a hierarchial sense. If one assumes that the ownership problems associated with the fisheries management are in one case with the province and the other case with the federal government, there have to be some country-wide issues where we can profit from putting something together. Although I'm not a great believer in motherhood statements, I think that we ought to have those statements necessary to justify the kinds of precise actions that we want to take. I think we have to focus on the real things that we want to see happen before we meet again.

Howard Paish: What we want to get out of this is more than a document. What we need is more specific. Let's put it the other way around. Basically, what we want is a positive, proactive strategy based on an anticipatory approach to management. If you start ranking your allies to fish, aquatic outdoor recreation, and aquatic dependant wildlife, then you start going to the other guy and saying; here is fish as the focal point, and the feds have this as their responsibility, what is your responsibility? That to me is the way we want to try and get it turned around. Peter Pearse is now starting on water policy for Canada. He will be expecting a pretty major statement from all of us on habitat. All the other guys will be after him with what they expect of the water, so there is a sense of urgency for us to focus upon.

Archie Tuomi: Let's leave the spreadsheet for the future and think of a process to come out of this conference achieving what we all agree should be done.

Ken Brynaert: The Canadian Wildlife Federation appreciates very much the opportunity to express our views, regarding what we consider to be goals, strategies and programs for the 1990's. I think it is fair to say that challenge is large, the basic breaking-out of crisis management and achieving an effective long term fisheries management program. I am reminded of a related exercise carried out almost a decade ago on Ontario fisheries. We are now faced with a much bigger challenge in attempting to put together a strategy on a national basis. My personal view is that such a task goes far beyond the

capacity of this conference, other than to agree on principles for a mechanism, some guidelines to carry out the work. The Canadian Wildlife Federation believes the job should be undertaken as a partnership of users and government with the hope that a report on the policy goals, and strategies would be made at the next biennial sports conference. We like the suggestion that was put forward by the Manitoba Lodges and Outfitters Association for a fisheries resource council. Some of our suggestions may be helpful.

First of all we prefer to identify with the recreational fisheries rather than specifically sports fisheries. We believe that an appropriate national approach could be looked at in three sectors; Atlantic, Freshwater and Pacific. The key issues requiring policy goals, strategies and programs can be categorized as conservation, allocation, support services; in essence, a regrouping of the ten goals listed in the spreadsheet. Conservation issues involve fish habitats and resources, an examination of needs for rehabilitation, maintenance and enhancement. The resource utilization or allocation requires an examination of user rights, priorities and the process of allocation. The support service category includes statistics through surveys, scientific information through research, experimental management, assessment of gross and net values of the legitimate uses through economic analysis. Consideration of who pays includes the user pay principle and communication of information amongst all the fisheries and management partners. You will probably note that we have omitted development in tourism. This was done deliberately. The state of the fish habitat and resource, as described at this conference, is such that rehabilitation rather than development should be the priority. Continuation of on-going collaborative programs should not be interrupted. The statistics surveys for 1985 and 1990 should be planned to incorporate the growing need for better statistics on recreational fisheries. Similarly, there is a continuing need for the Canadian Fisheries Reference Centre and the "MICS" system. We support the need for a recreational fisheries economic evaluation symposium for 1985, since there is a high priority need for the evaluation of resource inputs and outputs and gross and net values.

Roger Liddle: I recognize that we do need some continuing dialogue and input on this whole process of fisheries management. But I'm not sure how to proceed on it. There is a real need for this dialogue and I don't feel that we are right at this point, ready to outline exclusively our goals and strategies. I think that we have to work on it a little bit more. I'm not sure that we all agree on all the strategies yet or the goals and even some of the issues. I think I do agree with Ken Brynaert but I'm not sure of the appropriate body or mechanism that we should use. I think, as the Manitoba Outfitters have suggested, a National Council is one body that we could look at but I think we should also take a look at other bodies that might be more appropriate.

Jim Gilbert: I believe that the problem that we see before us is of such a magnitude that it won't be accomplished overnight, priorities have to be set. I believe, on behalf of the people that I represent, that Mr. Brynaert basically has got a handle on things when he says that they should be broken down into levels of tackling this problem and I feel that the Sport Fish Advisory Board of British Columbia has within its capabilities the real distinct opportunity and platform for contributing to this process.

Tom Davis: I represent the Sports Fishing Institute of British Columbia and we are new participants in this type of a major forum, so much of what Mr. Gilbert said I would echo. The concept of the national scope of it is something that we haven't dealt with, but are interested in and are certainly willing to look at in the supportive manner. Our paper was economics oriented, and I'd like to say that the Institute would welcome a much more enlightened dialogue with the Department of Fisheries and Oceans concerning the interchange of economic ideas. And we would like to portray that view through this type of forum. You must understand that out here on the coast we still have a paranoia that somewhere in the bowels of Ottawa there is a bureaucrat who is dissecting our economic arguments. That concerns us. We are certainly hopeful that management will look upon the economic valuations of the sports fishery as a whole. But we've got some concerns about the process, and I'll mention two. One is the hope that we would be able to design a mechanism to bridge the gap between the spoken words, around this table, and turn them into the reality of practical application in terms of our goals, programs and strategies. And our second concern is we have representatives from all across Canada who come here at considerable expense to present their various viewpoints. How do we present those viewpoints beyond this particular forum? Who do we present them to? In other words, are senior DFO management policy makers listening to us? I think that is something that we have to concern ourselves with as to how we are going to convey our final message.

Lorne Anderson: It's difficult for us from the Department to comment on behalf of the native owners and groups on national goals and the process. Though this was the first invitation to native owners, this forum will result in further inputs, perhaps next year, because the Assembly of First Nations are putting together an economic development secretariat and we will have somebody to represent the national interest of native people next year. From the Department's point of view, and I guess I can say from the Native's point of view, from what I have seen from the paper and spreadsheet, we do agree with several of the things in it. We recognize DFO's leadership in this. Our Department is dependent on the consultation and communication effort that we get from DFO and recognize that there is a need for progressively increasing information respecting the dimensions of the sport fishery. We see the priority for economic valuation of the sports fishery. That is particularly important to Indian people, and we would certainly support a federal/provincial industry work group, and I'm sure that the Assembly of First Nations and the Department would be pleased to be involved in some manner.

Wilf Carter: First of all, I like the idea of trying to develop national goals and national policies. I think that in itself is important and we want to do that. I like several things that I've heard today. I like the statement that Alberta discussed very much. It's a statement of goals and objectives for the province of Alberta. It is clear, it is precise, it starts out with an objective and then it breaks down into precise means of achieving these goals. There is a management component of it as well. I like that as an approach but I think the problem that we've got here is that this camel really can't design a national policy. It is too big and complicated for the camel. But there may be such a camel being proposed by the Manitoba Lodge and Outfitters Association. I like the Fisheries Resource Council of Canada idea and maybe it could be a starting point to carry on and develop the goals and objectives of policy that we all agree are necessary.

John Clarke: The idea of the Fisheries Resource Council is kind of a raw idea and Ken Brynaert suggested maybe it could be a foundation. The form it takes is important but I don't think anyone has got really hard and fast ideas on that *just so long* as it is functional and does the things that we want it to do. That is the important part. I agree with Ken Brynaert's assessment of the the things that we should look at but I would also like to add some of the following concerns. I think we as a body should recognize that our present system of resource management right across the country is not working. I don't know of anywhere in Canada where we don't have diminishing supply. I can show you places in central Canada where there were beautiful trophy lakes. Now those lakes are no longer trophy lakes because they have never managed to wrestle with the problem of denying somebody access. Just the simple thing of saying no. The political process has been such that managers have never been able to say no. I know it is a social problem that we have that everybody has to have equal access. But I believe there are mechanisms we can put in place where rich or poor can have equal access. I also feel that you can price the resource. I think these two things are extremely important to what we are doing here today. If we don't consider these very basic fundamental problems, all the building blocks for looking into the 1990's, and all of the things that we are trying to do, if we don't have adequate resource and we don't develop methods of sharing and allocation, then all of the rest of the stuff goes by the wayside.

The third point is that Aboriginal claims are a fact of life. Now there is very little Aboriginal representation here, but I work in areas where it is important and I would suggest to all of you people who are in management, and all you people who want to devise where we are going in the 1990's, to include the Aboriginal people, because for all intents and purposes, they are going to be in many cases the new owners, and they are going to be the people you are going to be talking to and negotiating with on how you are going to use their resource. That may sound scary, but really and truly, it isn't as bad as it may sound. It could be actually a very good situation. Not to be terribly critical but if you look at the way we've managed our resource and the way we screwed up, I'm going to ask you, do you think they are going to do any worse? You know, that is the truth. So I think that if we were to incorporate those things into the plan, I think the Manitoba Lodges and Outfitters Association would be quite happy.

Dick Roberts: I have some difficulty with the concept of a Fisheries Resources Council of Canada, whatever the title was, simply because I think that it would be too large and too unwieldly a group to do an effective job. We are talking about one federal department, maybe even three. We are talking about ten provinces, two territories, the Canadian Wildlife Federation, representatives of the sport fish industry, and that is just the sport fishery. Then we are talking about the native fisheries, the commercial fishery, about unions, other fishermen's organizations and processor groups. When we sit down and talk about allocations and the management of groundfish in Atlantic Canada, we pretty well have to rent an arena and I'm worried that we might have to rent the dome to accommodate everybody who might have to be represented in such a forum as the one proposed. Either it is completely representative of all interest groups or it is a very select group. My own suggestion would be let's just get on with the job of developing this national statement of goals and objectives for the sport fisheries. Let's confine our attention to the sport fisheries.

Art Holder: I'm not sure why anybody would want to say anything at this point. Speaking as a government person, I would welcome a national lobby, in the best sense of the word, of fisheries users who would identify their common concerns and demands of governments. And so I am personally very supportive of any effort by the Canadian Wildlife Federation or any other group that can organize that kind of lobby. I think that any kind of council, if you will, ought to come after that. I have felt personally, as a Director of a provincial fisheries branch, that we haven't had a senior level meeting, a level at which Ministers were concerned, and Directors of Fisheries were concerned or whatever. We haven't had that kind of a level of meeting. It's my impression this is the first effort to look at things at that kind of level. Previous conferences have been at a technical level. So I do see also the need for governments to get together at that level and resolve some issues. I certainly see some pretty crunchy issues that I think we ought to address as bureaucrats. The Fisheries Act in relation to habitat, it's difficult. It needs to be addressed. It is not effective. We haven't resolved that. Federal government has started the initiative, but it is far from clear how the Fisheries Act will be used. It is not resolved. I think there is a need for communication. I certainly think there is a need for ongoing statistics and mutually agreed upon research priorities. All this discussion about allocation, for example. You could go back and say that there is some fundamental need for some social research in terms of the commonality of allocation problems. I don't want to be accused of just asking for more and more research, but here we are talking about all these various allocation questions and we really don't have the basis to evaluate the best mechanisms from a tourist point of view and so on. A lot of suggestions but very little light. Some of these issues could be addressed in a national context in that way. We might learn a little bit on how the federal and provincial governments operate in the forestry area. Somehow or other there ought to be a mechanism for federal/provincial co-operation which mobilizes dollars and effort that we can't seem to achieve in the fisheries area.

Bill Hooper: Federal/provincial bureaucracies scare me to death when it comes to accomplishing anything, especially new or innovative things like what we're talking about now. I think there is a real need to inform the users and the publics about the spreadsheet and where all the value is in sport fisheries or recreational fisheries. And I think the way to do that is to encourage them to get involved.

Ron Thomas: I would like to take about 5 minutes, and for those of you who have the paper entitled Canadian Sport Fisheries Goals and Programs, on page 202 there are nine items. There are nine items which have been variously addressed. Mainly in a positive way and what I would just like to do is to go through those nine items and give my impression of support, or lack of support, from this group. I don't want to entertain debate, I want to find out where we are at. I think there is still time for the committee to do other things. This is largely based on Ken Brynaert's walk through the thing. The first item has not been brought up, because it is really a federal organizational problem. One of the first commitments to the 1990's of the 1984 conference and a primary responsibility of the above unit is to schedule and organize the next biennial CFS conference at which the results expected from '84 will be reviewed. I agree that it must be done and how the federal government continues to carry out its role in organizing the developing these conferences is their business, but we want a continuation of this process. Number 3, starting as soon as possible, inter-governmental consultation should follow and arrangements should be made

for annual meetings of all the directors of sport fisheries in Canada. Besides providing an ongoing means for inter-governmental consultation and program consideration, this forum could also provide guidance on CSF conference reports and arrangements. It is not clear in my mind, but I feel that there are two kinds and perhaps two sizes of meetings that are required for different purposes. I think that if the directors or chiefs of fisheries had been meeting reasonably regularly for the last six or eight years, this meeting would be light years ahead of where it is now because we would have had our homework done. Four, the immediate priority is the co-operative funding and conduct of the '85 survey of sport fishing. If anybody is against that and motherhood, then Brickley you had better leave. I think there is agreement on that. Five, an inter-governmental committee should be established to consider choices and make recommendations regarding the establishment and operation of a Canadian Recreational Fisheries Development Fund. I don't think that is a priority item here because it has been brought up in other ways and presumably it will grow or wither. Does anybody have a quick comment on that?

Art Holder: I'm not sure I quite agree. I think it is a very promising area that ought to be investigated now. It may not be a priority but I think it is an area that ought to be investigated.

Ron Thomas: Six, a federal/provincial/industry task force or work group should be established to consult with all sport fisheries agencies respecting the nature, the requirements and the feasibility of development of a sport fisheries tourism development and marketing strategy. Reports on this should be made to both the first meeting of sport fisheries directors and the next CFS conference. I forget who it was, but someone said, we have got to have something to market before we start emphasizing marketing. I think we've got a supply problem that somewhat makes marketing a little bit inappropriate at this point and time.

Don Toews: I wouldn't put that as a priority either. It seems to me what is coming from this conference is mostly resource problems rather than marketing problems. And secondly that I don't think it is necessarily the appropriate group to get together on tourism markets. I think that should be left to the tourism markets.

Ron Thomas: Number 7, Though other means are already in process, more detailed reports and recommendations should be made to the first meeting of directors of sport fisheries regarding habitat matters, scientific research directions and needs. I think it is important, I don't think it is an issue. A related priority, number eight, is the re-establishment of the Canadian Sport Fisheries Reference Centre and the resumption of "MICS" as recommended at the '81 conference. I strongly support that. In 1970, 1972 and in 1974, the federal government agreed that they had a leadership role and a service role. For those of you who don't understand what "MICS" is, if we publish something, we send it to Archie, who makes 50 copies of it and sends them to everybody who is in this business, including EIFAC in Europe, and related people. Number 9, an international sport fisheries economic evaluation symposium like the one in 1965 should be convened in 1985 to clarify and resolve remaining questions regarding the valuation of sport fisheries and what is meant and covered in best use.

Archie Tuomi: I like the idea because I started into recreational fisheries economics at the 1965 Symposium on the Economic Aspects of Sport Fishing. Copies of that publication are scattered around the world in nearly every major library. It is still being quoted and I think if we could pick up from that and take another major step like the one that was taken back in '65, I think we can accomplish a lot. That is a personal bias and I would just say that I would support that idea.

Charles Livingston: I haven't objected to what you've gone through. I think we've made a start at this conference on some interesting involvement between governments and basically the public interest groups, and I think the public groups should be involved as much as they want to.

Ron Thomas: What I wanted to do was to find out what people agreed with and disagreed with on this paper and it has worked fairly well. I'm just dealing with what was in print that Ken responded to, and that is all I was trying to do.

Bob Duncombe: We in Tourism Canada, in the new federal Department of Regional Industrial Expansion, have had most of our interdepartmental liaison at the federal level with Parks Canada and Transport Canada. Now that Fisheries and Oceans is preparing to give priority to the sports fishery, it seems to me that we should be liaising in the future with the Department of Fisheries and Oceans. However, I also heard it said that there is no point in marketing or launching a marketing program unless there is a product to market. So we will have to take advice from Fisheries and Oceans, as we do from Parks, or Transport, to market the sport fishery if that is what you want us to do do. Certainly, for example in 1985, which is the year of Canada's National Parks Centennial, which is being developed under a larger theme of Canada: One Hundred Years of the Preservation of Heritage Places in Canada, the Tourism program will be theming its year under the realm of heritage. We could be doing the same for fisheries in the future, but I hear the industry, the Canadian Wildlife Federation and others, saying be very careful that there is a product there to market.

Roger Liddle: As far as marketing the sport fisheries, I don't think we want to indicate that we don't already have a market. We may have problems with our fisheries supply in some areas, but we certainly do have a very viable fisheries market and fisheries operations in Canada. I would certainly hate to and fear to advise Tourism Canada to soft-pedal any of their present marketing thrust on fishing.

Archie Tuomi: I think we've come to a stage indicated at the start that, first, we have to get to know each other and what we are saying and, second, we have to learn to work with each other. We're possibly now at the stage somewhere between step two and step three, and I think this might be a good point to stop.

Victor Rabinovitch: There is just a positive note I could try to add to the discussion. The Minister last night made as clear as he could his personal commitment, and his Department's commitment, to raising the profile of activities and the commitment of the Department on sport fisheries. One of the reasons I haven't been able to spend as much time in here as I would have liked to in the last two days is because I'm fighting over the phone for more dollars and people because as both private sector and public sector bureaucrats know,

that's what really counts in the end. I want to say regarding some of the points that we have just gone through that I will do my very best to get the dollars to be able to upgrade "MICS" and the information centre, and to provide activities beyond what has been done in the recent past. I want to be very positive about that.

OUTSIDE PERSPECTIVES ON SPORT FISHERIES GOALS AND PROGRAM FORMULATION

United States

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Introduction

Thank you very much for inviting me to join you today. I come to the 1984 Canadian Sport Fisheries Conference with three major purposes in mind. First, I made a commitment to your Chairman, Mr. A.L.W. Tuomi, to participate on this panel. Second, I want to learn as much as I can from your discussions and deliberations. Third, I come to renew old aquaintances and, hopefully, make new friends. Today's panel is to address the subject of experiences by other countries and agencies in the formulation of recreational fisheries goals and the implementation of policy. I plan to share with you some of my views regarding the development of a marine recreational fisheries (MRF) policy, and its adoption and implementation by the National Marine Fisheries Service (NMFS).

I want to make it quite clear that in no way is your neighbour from the south trying to tell you that our way is best and that you should follow in our footsteps. That would be presumptuous and in bad taste on my part. However, as a result of our experiences, our successes, our failures, and sins of omission, you may be able to avoid some pitfalls and develop a policy that more appropriately fits your needs. So, before I address any questions you might have, I will review briefly my views on how NMFS arrived at its MRF policy and the status of its implementation.

Historical Highlights 1871-1969

To set the stage, I will review some historical highlights regarding the development of Federal fisheries policy and responsibilities in the United States, especially as they relate to the development of the NMFS' MRF policy and its implementation.

1871

In 1871, just six years after the end of the Civil War and one year after the American Fish Culturists' Association (now known as the American Fisheries Society) was organized, the United States Congress authorized the creation of the U.S. Commission on Fish and Fisheries, and Spencer F. Baird, Assistant Secretary of the Smithsonian Institution, was appointed Commissioner of this new agency.

He was directed to investigate the conservation of food species on the coasts and lakes of the Nation. This was the beginning of fisheries investigations by the U.S. Federal Government. Prior to this time, starting with Massachusetts in 1865, ten states had established fisheries commissions. These state fish commissions had small appropriations and their activities were largely regulatory.

1903

In 1903, the name of the U.S. Commission on Fish and Fisheries was changed to the United States Bureau of Fisheries.

1950

The Federal Aid in Fish Restoration Act of 1950 (sometimes known as the Dingell-Johnson Act, or the DJ Act) is a Federal grant-in-aid authorization designed to help the states solve their sport fisheries problems. The Secretary of the Interior is authorized and directed to cooperate with the states in fish restoration and management projects.

1953

Following extensive and complex litigation in the U.S. Supreme Court, it was determined that under the Submerged Lands Act (SLA) of 1953 all coastal states would have title to and ownership of natural resources off their coasts, including the "right and power to manage, administer, lease, develop, and use the said lands and natural resources...in accordance with applicable state law". Natural resources are defined in the SLA to include, without limitation, "oil and gas, and all other minerals and fish, shrimp, oysters, clams, crabs, lobsters, sponges, kelp, and other marine animal and plant life..." The seaward extent of coastal states' jurisdiction over such natural resources was established in the SLA at three nautical miles from the coastline, with an exception permitting states abutting the Gulf of Mexico to establish broader limits of jurisdiction (up to a maximum of three marine leagues) based on historical boundaries.

1956

The Fish and Wildlife Act of 1956 was passed by the United States Congress and on August 8, 1956, was signed by President Eisenhower. The "Declaration of Policy" of the Act states in part that "The Congress declares that the fish, shellfish, and wildlife resources of the Nation make a material contribution to our national economy and food supply, as well as a material contribution to the health, recreation, and well-being of our citizens; that such resources are a living, renewable form of national wealth that is capable of being maintained and greatly increased with proper management, but equally capable of destruction if neglected or unwisely exploited;..." The Act established the Bureau of Commercial Fisheries and the Bureau of Sport Fisheries and Wildlife to form the U.S. Fish and Wildlife Service of the Department of the Interior.

1959

The Migratory Marine Game Fish Study Act of 1959 directs the Secretary of the Interior "to undertake a comprehensive continuing study of migratory marine game fish of interest to the recreational fishermen of the United States", and authorizes expenditures of no more than $2.7 million in any one fiscal year for the purpose of the Act.

1959 - 1965

Although the Fish and Wildlife Act of 1956 referred to "the inherent right of every citizen and resident of the United States to engage in fishing for his own pleasure, enjoyment, and betterment", there was little or no substantive Federal attention paid to marine recreational fishing until after passage of the Migratory Marine Game Fish Study Act of 1959. However, it is important to note that the first of the continuing surveys of fishing and hunting activities in the United States, conducted every five years by the U.S. Fish and Wildlife Service, was conducted for 1955. Actual work under the Migratory Marine Game Fish Act was first undertaken during the early 1960s by the Bureau of Sport Fisheries laboratories at Sandy Hook (Highlands), New Jersey; Narragansett, Rhode Island; and Tiburon, California. In 1966 the Panama City laboratory was opened, and in 1972 (after the program had been transferred out of the Bureau) the Port Aransas laboratory was opened. Initially budgets for the laboratories were modest, reaching only a total of a half million dollars in the mid-60s.

1966

Although it continued to adhere to its traditional territorial sea-breadth claim of three nautical miles, the United States, in 1966, adopted the Exclusive Fishery Zone Act (EFZA) which extended fisheries jurisdiction to twelve nautical miles from the coastline, thus creating an additional nine-nautical-mile belt of national jurisdiction. The Federal Government did not attempt to regulate fisheries in this contiguous zone, except to exclude or regulate foreign fishing vessels.

A Period of Expansion, Trial, and Error, 1970 - 1979

1970

Under Reorganization Plan No. 4 of 1970, the National Marine Fisheries Service was established within the National Oceanic and Atmospheric Administration of the Department of Commerce. Among other responsibilities, the National Marine Fisheries Service took over the MRF functions authorized under the Migratory Marine Game Fish Study Act of 1959 from the U.S. Fish and Wildlife Service. At that time there were 60 people involved in the program, most of them at Sandy Hook, New Jersey, and the annual budget was just over a million dollars.

1972 - 1973

The Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973 gave the National marine Fisheries Service significantly new responsibilities, but initially provided little in the way of additional funding.

1976

Prior to 1976, the only fisheries management taking place in the United States was carried out by state governments for fish caught within their waters, or in some cases, landed at their ports. Management by the Federal Government was limited to stocks outside state waters covered by international treaties. In 1976, the Magnuson Fishery Conservation and Management Act (MFCMAA) (16

U.S.C. 1801 et seq.) was passed. The Act extended U.S. jurisdiction over fisheries to 200 miles from the U.S. coastline and established eight regional Fishery Management Councils to manage fisheries in conjunction with the states and the Department of Commerce's National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS). The Councils prepare, monitor, and revise fishery management plans, and the Secretary of Commerce, through NFMS, reviews, approves, and implements them. The Councils are made up of state and Federal officials as well as members of the general public. These plans provide the basis and describe the conservation, management, and regulatory measures to govern and control specific fisheries. Special provisions have been established when Councils have to manage stocks jointly with each other, with the states, or with Canada or Mexico. Thus, with passage of the MFCMA, the U.S. policy has changed and the Federal management role has shifted from management of fisheries under international agreement to management of all fisheries within the fisheries conservation zone under a system of participatory regulation involving Fishery Management Councils and the public. It should be noted again that states have maintained control of fisheries within three miles of their shores.

1979

Throughout the 1970s there was considerable criticism by many individuals and organizations regarding what they considered to be an over-emphasis of commercial interests by the National Marine Fisheries Service. These critics questioned NMFS' commitment to MRF, and they cited chapter and verse in various publications, letters, and forums to support their contentions.

The Awakening (A Partial Success Story), 1980 - 1984

1980-1982

During 1980 and early 1981, at the request of the Assistant Administrator for Fisheries, the NMFS Office of Policy and Planning evaluated the Agency's MRF program. A detailed 186-page evaluation report was completed in July 1981. It substantiated many of the allegations that NMFS had not given appropriate attention to MRF matters.

The following excerpts from the evaluation report illustrate the tone of its findings:

> "The history of the marine recreational fisheries program in NMFS has been troubled with almost constant pressure from constituency representatives for a larger and more visible program. This pressure has been accompanied by repeated allegations that NMFS, as a descendant of the Bureau of Commercial Fisheries, has unduly favored commercial fisheries in its programs, and has not given appropriate attention to recreational matters.
>
> "NMFS and NOAA, at least partly in response to these external factors, have made many policy declarations implying increased attention to recreational fisheries matters. Many if not most of these policy statements have later been shelved, with

> little or no followup. Continued declarations of interest, followed by little or no action, have led to considerable, and in some cases at least, well-deserved loss of credibility."

Using some of the findings of the MRF evaluation report as a starting point, a special Task Group was established to recommend a policy that would more fully integrate MRF into all of the Agency's major program offices and activities. The Task group defined MRF in terms of three elements -- the resource (fish and habitat), the users (fishermen, consumers, general public), and the industry (supporting industry which provide goods and services, e.g., bait, tackle, boats, motors, charter/headboat services, etc). Problems associated with each of these three elements were discussed in the report.

On October 13, 1981, William G. Gordon, Assistant Administrator for Fisheries, NMFS/NOAA, formally adopted the MRF policy recommended by the Task Group for the Agency. On February 9, 1982, notice of the adoption of the NMFS MRF policy was printed in the Federal Register by the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce. This policy states:

> "NMFS, through its various programs, will protect, conserve, enhance, manage, and develop fishery resources of importance to the Nation in order to increase the Nation's food supply; promote increased opportunity for both commercial and marine recreational fishermen consistent with the concept of optimum yield; and promote activities which will assist the commercial and marine recreational fishing industries to thrive and expand."

This policy carries out the NOAA Administrator's guidance on policy and management priorities, and emphasizes international competitiveness of American industry, improving productivity and innovation by American enterprise, and reducing Government regulation of industry. The policy is now being implemented through the strategic planning process of NMFS, taking into account ten specific recommendations made by the Task Group and Federal budgetary constraints.

The Task group recommended that the first three of the ten recommendations be given highest priority. The ten recommendations are as follows:

1. NMFS should develop a comprehensive MRF data acquisition and analysis system (participation, catch, effort, and socio-economic data) on a regular, continuing basis.

2. NMFS should undertake a vigorous program of communication and coordination with MRF interests--the fishermen, the industry, constituency groups, and other Government agencies (Federal, state, and local).

3. NFMS should expand its traditional role of considering only the fishery resources upon which marine recreational fishing depends, and move toward a broader and more integrated approach to MRF which also considers the MRF users and the supporting industries. With respect to

the MRF industry, NMFS should identify and recognize that industry as a constituency, and develop a strategy to assist the MRF industry in overcoming problems and achieving greater efficiency and productivity.

4. NMFS should examine its product quality and safety, nomenclature, and consumer programs to determine how these programs can contribute to the information and education needs of MRF users.

5. NMFS should undertake a comprehensive assessment of existing Fishery Management Plans and regulations to insure that they do not place on the U.S. fishing industry (commercial and recreational) the burden of unnecessary or ineffective regulations. Further, NMFS should insure that the benefits of such regulations justify the costs.

6. NMFS research activities in support of conservation and management should continue and, where possible, be improved, recognizing the MRF biological and ecological information needs which have been identified and which are also important to MRF development.

7. NMFS should continue to work with the states and foreign nations to improve interjurisdictional conservation and management of fishery resources.

8. NMFS should continue, to the extent possible, efforts to minimize destruction and impairment of coastal and marine resources resulting from habitat alteration. More attention should be given to balancing mitigation and enhancement with development.

9. NMFS should play a catalytic role with other Government (Federal, state, and local) and private entities in facilitating improved access to provide increased opportunities for MRF users and to stimulate MRF industry growth.

10. NMFS should work with MRF interests to see innovative funding mechanisms for MRF activities, including expansion of the Dingell-Johnson program, in which the user benefits and pays. NMFS should also aggressively promote appropriate legislation to obtain sufficient fiscal and programatic capability needed to fulfill its MRF responsibilities.

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Performance objectives, consistent with the overall NMFS mission and goals and the MRF policy, have been identified throughout the Agency and have been included in Senior Executive Service, Merit Pay, and General Work Force employees contracts, where appropriate, throughout the Nation.

Although there are still significant problems regarding the implementation of the MRF policy, the NMFS MRF constituency generally has supported the Agency's efforts.

Note: On November 25, 1983, NOAA issued a habitat conservation policy in the Federal Register for NMFS. It provides a focus on NMFS' habitat conservation activities, and at the same time provides for the integration of habitat conservation considerations throughout the major programs and activities of the Agency. The effort of this policy is to make NMFS' habitat conservation activities more responsive to the goals and objectives of the Agency as set forth in the NMFS Strategic Plan, and to allow priorities to be set and defended. The MRF and Habitat Conservation Policies are designed to complement each other.

AGENCY MISSION

ACHIEVE A CONTINUED OPTIMUM UTILIZATION OF LIVING MARINE RESOURCES FOR THE BENEFIT OF THE NATION.

NMFS STRATEGIC PLAN

- Establishes framework of NMFS goals and objectives
- Consistent with Agency mission
- Consistent with assessments of existing and future trends of fisheries environment
- Consistent with national and regional program strategies
- Provides resource projections needed by NMFS in next five-years to achieve goals and objectives
- Provides stability to Agency direction and flexibility by being a working document
- Progress reviewed periodically and plan updated annually

NMFS GOALS

- Conserve and manage fishery resources for the maximum benefit of the United States
- Maximize the economic and social benefits from the United States fishery resources by contributing to the stability and growth of the Nation's fisheries
- Conserve populations of marine mammals and endangered species that are affected by domestic and international human activities
- Conserve marine habitats and associated ecosystems necessary to sustain living marine resources

United States

Funding Recreational Fisheries Programs: The United States

Gilbert C. Radonski
President, Sport Fishing Institute

The invitation to speak at this Conference was extended by Mr. Archie Tuomi with the only ground rules that I address recreational fisheries funding programs that are used in the United States. Since my experience lies only in funding programs in the United States, my comments are inherently chauvinistic. However, my remarks are not intended to be condescending, pedantic or imply superiority over currently employed Canadian programs.

Funding programs for recreational fisheries have evolved under a very complex set of institutional arrangements which have management authority over the fisheries of the United States. In general, the authority to manage and regulate recreational fisheries within the United States lies in the individual 50 states. In the marine coastal states, this generally extends out a distance of three miles (the territorial sea). Beyond three miles to a distance of two hundred miles (the fishery conservation zone), the management authority lies with the federal government. Although yet untested, the federal government has implied authority over fishes which move between the territorial sea and fishery conservation zone.

Although the management authority for recreational fisheries is largely the domain of state governments, there are situations where the federal government has retained ownership rights. This the case on federal lands where the federal government reserved ownership of the fish and wildlife resources. That circumstance is restricted to certain national parks, military lands where national defense is a consideration, and on Indian lands where those rights have been ceded by a treaty. However, from a national perspective this is a small part of the total. The major area where the federal government becomes involved with state governments in the management of recreational fisheries is in areas where a federal action attracts large numbers of users putting an untoward strain on the resource. This includes such areas as national parks; national forests; other federal recreational lands; and federally-constructed reservoirs. It should be remembered; however, that in most of these latter cases the basic ownership of the fishery resource is retained by the states and any fishery management regimes must meet with the approval of the states, usually conforming to state regulations.

As I describe various funding programs used in the United States it will become evident that relatively few dollars originating from the federal treasury go to the states for actual recreational fishery management. Also, as I explore the various funding opportunities and mechanisms, it must be kept in mind that the American political process is driven by a state-federal relationship. Simply stated, the United States Constitution gives to the individual states all rights that are not specifically retained by the federal government. This permits a broad range of interpretations and has been expressed as a "State's

Rights" philosophy. The states jealously guard their rights while federal government continually applies pressure to capture some degree of involvement,usually by providing funds with "strings attached."

Regardless of the governmental unit, state or federal, that originate or disburses funds there is continued need to address the need for increasing the level of public investment in the fishery resource base. Without a doubt, if the fishing public is to be attracted to recreational fishing, the fishery resource must be of sufficient quality and quantity to attract the discretionary dollars the public has to spend on outdoor activities. In 1980, according to the United States Fish and Wildlife Service's National Survey of Hunting, Fishing, and Wildlife Associated Recreation, fishermen spent $17.3 billion pursuing the sport of fishing. Protecting, managing and enhancing the fishery resource base which generates expenditures of this magnitude is important to the United States economy.

Improvement of the fishery resource will only come about by increased capital expenditures for intensive management of existing waters and the construction of new fishing waters. In the late 1960's and early 1970's, the United States government invested huge sums of money in water development projects (reservoirs) for flood control, hydropower, etc. Although recreational fisheries are considered an ancillary benefit not a primary project objective, the millions of new acres of water resulted in greatly expanding the fishery resource base. This action resulted in more and better fishing opportunities. It is estimated that 1/3 of all freshwater fishing in the United States is done on man-made reservoirs.

In 1972, the Federal Clean Water Act was passed which contributed substantially to increased fishing opportunities by cleaning up grossly polluted waters. The federal government spent in excess of $10 billion with a goal of having all the waters of the United States "fishable and swimmable" by 1983. The combination of creating new fishing waters and cleaning up polluted waters increased fishing opportunities which attracted millions of new fishermen. In 1965, there were an estimated 28.3 million anglers and by 1975 there were an estimated 54 million anglers. By 1980, the construction of large reservoirs was out of vogue, thus, new fishing waters are not coming on-line, and most of the grossly polluted waters has been cleaned up. The precipitous decline in the rate of growth of new recreational fisheries is reflected by a stabilization of the number of anglers. In 1980, the U.S. Fish and Wildlife Services' Survey found there were 54 million anglers -- the same number as in 1975 indicating a virtual plateauing of the numbers of anglers, new anglers equalled attrition. The case in point is, if there is to be a significant expansion of the fishery resource base to satisfy increasing numbers of anglers, it can only come through substantial government, state and/or federal, investment. No longer is it a case of increasing the base (new fishing waters) to satisfy the needs of anglers but rather intensively managing existing fishery resource to accommodate future growth in the number of anglers.

Intensive fishery management is expensive but cost-effective. In testimony presented during a Congressional hearing to reauthorize the Anadromous Fish Conservation Act, it was demonstrated that there was a $17 return to the economy for each dollar spent on anadromous fisheries.

Where is the money to come from for fishery management in this time of shrinking state and federal fishery budgets? One obvious answer is the angler, the user of the resource. Is it to be from across-the-board increases in fishing license fees? Our examination of the complex, widely varying licensing fee structure of the 50 states and the political intricacies of the gaining substantial license fee increases on a timely basis, indicates that the answer is probably not. We know that expanding the historic Dingell-Johnson tax base (an advalorem tax at the manufacturers level on selected items of fishing tackle to be discussed in detail later) has its critics. Should monies come from the state's general treasury? Dedicated taxes? Where?

I do not understand the Canadian fiscal process either at the federal or provincial level so I will not attempt to suggest revenue generating schemes for your use. I would like to describe methods used by our Federal and State governments discussing their advantages and shortcoming, and in the process describe the philosophy of the various methods.

In the latter part of 1982, the Sport Fishing Institute sent questionnaires to the 50 state fish and wildlife agencies requesting information describing revenue sources and funding allocations used to support fishery programs for their fiscal year 1982. Completed questionnaires were received from all 50 states responsible for managing recreational fisheries both fresh and marine waters. (For a detailed report on the results of the funding questionnaire see SFI BULLETIN 343, April 1983.)

Fishery programs sponsored by the 50 states fishery agencies received a total of approximately $304 million in revenues during 1982. Recreational fishing license receipts constituted the principal revenue source 72%, followed by federal payments 16%, the general taxes appropriated by state legislatures and special taxes such as marine fuel taxes, taxes on cigarettes and severance taxes, 8%. The remaining 4% of fishery program generated revenue was collected from a myriad of sources including agencies receipts from fines and forfeitures, penalties assessed from fish kills, various user fees, product sales, contracts with other agencies, mitigation funds received from private and municipal power companies, etc.

Four areas of funding have been identified: recreational fishing licenses, federal payments, special taxes, and other. I would like to discuss each of them in term.

Recreational Fishing Licenses

Recreational fishing licenses here include licenses, stamps, permits or any fees charged by any governmental unit for access to the recreational fishery. Recreational fishing licenses income has been the historic financial base for many state fishery agencies. Of the 54 million United States anglers enumerated in 1980, approximately 29 million were licensed. The young, the old, the infirm, the military, are exempted or are not subject to most state fishing licensing laws. (Fishing license fees and exemptions for all 50 states are identified in the 1983 NATIONAL SURVEY OF SPORT FISHING LICENSE REQUIREMENTS compiled by and available from the Sport Fishing Institute).

Many state legislatures have used the bestowal of exemption to the categories aforementioned from licensing requirements as a social exemption without compensating the state fishery department for revenues foregone. If the fishing license is truly a user pay tax, then all users must pay. The income foregone as the result of exemptions from licensing provisions should be borne by the states general treasury, not an added expense to the license-buying sector of society. As an example, the state of California is a state which has remunerated its fishery agency for senior citizens fishing license exemptions (generally those over 62 years of age). In 1981 the California legislature failed to appropriate monies to reimburse the fishery agency. So, in 1982 the agency did not permit a senior citizen exemption; they were required to buy a license like everyone else. In 1982, California was the only state that did not exempt or reduce the license fee for senior citizens.

State fishery agencies have come to depend on fishing license sales as a principal source of revenue to fund fishery conservation programs. The state fish and game agencies have done well by fishing license sales in past years. The period 1967-1978 suffered from significant inflation that resulted in nearly halving of the U.S. dollar's value (1967 U.S. dollar value = 1.00, 1978 U.S. dollar value = 1.95). Income from fishing licenses in that same period increased by a factor of 2.17. The net gain of 11% after compensating for inflation, provided a small amount of real growth. Yearly incremental increases of fishing license sales in the 1964-1974 period averaged 3.4 percent per year, and then levelled off. There were decreased numbers of licenses sold in 1977 and 1978; 1979 and 1980 sales were only slightly above the 1976 level. However, double-digit inflation in that period took its toll, and the 1979 and 1980 fishing license income, adjusted for inflation, was below the 1976 level.

Historically, when fishing license fees are increased, the number of new anglers buying licenses decreased in direct proportion to the size of the license increase. The increase forces out many "occasional" fishermen. The occasional fisherman becomes very important to funding, it is doubtful that sound recreational fishery programs can persist if only monies from "hard-core" anglers are available.

The following table shows that between 1970 and 1980 the states that implemented the largest license fee increases had the smallest net gain in licenses sold.

Comparison of increase in number of paid license holders with change in license cost and population from 1970* to 1980** (all figures are percentages).

	Incremental increases in license cost per angler				
	0-24	25-49	50-74	75-99	100 or more
Number of states	6	5	17	13	9
Average license increase	13.5	42.6	64.2	85.0	124
Increase in number of licenses	35.2	26.0	20.0	15.9	6.1
Increase in population	11.6	11.8	10.6	12.6	14.1

* 1970 -- 24,434,680 fishing licenses sold
**1980 -- 27,994,917 fishing licenses sold

Unfortunately, the setting of fees for fishing licenses, with minor exceptions, is done by the respective state legislatures. The ideal circumstance is for the fishery agency to set the license fee. The present procedure involves protracted procedures that interjects partisan politics and uses fishing license fees as political trading stock. Because of this, increases in licence fees often lag behind need and the fishery agencies play catch-up and never quite seem to match demands with the money to meet those demands.

The bottom line is that as presently constituted, the use of fishing licenses is not an equitable or a timely way of financing recreational fishery programs. Until the inequities are resolved, fishery agencies must look to other sources to provide increased income to finance their programs.

Federal Expenditures

The next area I would like to discuss is federal expenditures. In the survey conducted by the Sport Fishing Institute referred to previously, federal payment to the states amounted to 16% of their income. But, on close examination as to what constituted federal payments we will find that of the $47 million identified in this area, 30 million, or 64%, was actually contributed by the angler not the federal government; hence, it is actually a user-pay tax! So, it turns out that only 5.6% of the states' revenue source was from actual federal payments, let me explain.

Lumped into "federal payments" are receipts from the Federal-Aid and Sport Fish Restoration Act commonly known as the Dingell-Johnson (D-J) Act named for the Congressional sponsors of the Act which was passed in 1951. The Dingell-Johnson Act imposes a 10% manufacturers excise tax on rods, reels, creels, lures, artificial flies, and baits. The manufacturer adds this cost into the

price of the product and passes it on to the angler. So, in fact, this is a user-pay tax not a contribution by the federal government. The monies collected by this tax are distributed by the Secretary of the Interior to the states on a formula basis. That formula consists of two parts. Sixty percent of the state's apportionment is based on the number of licensed fishermen in the state in ratio to all the licensed fishermen in the United States. The second part of the formula distributes 40% of the state's apportionment based on the combined land and water area of the state in ratio of all the land and water area of the United States. No state can receive more than 5% of the fund and no state can receive less that 1% of the fund. The states are required to match the apportioned D-J funds at the rate of one state dollar for each three D-J dollars. In recent years, approximately 36 million dollars have been collected annually. Prior to disbursing the funds, the Secretary of the Interior retains 8% of the fund for administrative costs. As an example, the D-J taxes in 1983 totaled $34,981,798. Of that amount, $2,201,798 or 6.3% was retained by the Secretary of the Interior for administration (again, by law it cannot exceed 8%). The maximum state apportionment was $1,639,000 and the minimum $109,267.

Currently, there is amending legislation before the United States Congress that would significantly expand the Dingell-Johnson Program. The amendments, expected to pass sometime early this year, will expand the fund from its present level of approximately $35 million to $100 million or more while retaining its basic user-pay concept. The additional monies would come from several sources. As I mentioned earlier, the present tax applies only to a limited number of items of fishing tackle. Under the amendments, most items of fishing tackle directly used for recreational fishing would be taxed at the 10% level. Also, for the first time, import duties collected on fishing tackle, pleasure boats and yachts would be applied to the Dingell-Johnson Fund, and transfer a part of the monies authorized by the Boating Safety and Boating Facilities Improvement Act to the D-J Program. The source of the latter fund is a nine cents per gallon motorboat fuel tax paid by boaters. Previously, I mentioned that the amended D-J tax will retain the user-pay concept. I would like to point out that boaters (boats under 25ft) spend a considerable amount of their boating time fishing, and therefore, programs that benefit fishing will ultimately benefit boaters. A specific example is the construction of boat access ramps with D-J funds.

Excluding Dingell-Johnson funds, there are $17 million of direct federal payments to the states that are made up in a variety of many small programs. Unfortunately the level of funding of these programs rises and falls, and in this era of tight federal budgets they tend to fall and cannot be relied on.

An area of potential funding of significant proportions and which constitutes true federal payments is in the area of funding renewable natural resources with the proceeds from the sale of non-renewable resources. This concept would provide money for the management of such renewable resources as fish, wildlife and forests with monies from the sale of coal, oil, etc. from federal lands, particularly the outer continental shelf (OCS). I would suspect that this philosophy would be very attractive to countries such as Canada that have a wealth of non-renewable natural resources and a relatively sparse population.

I think I can best explain the applications of this concept by explaining legislation currently pending before the United States Congress. The legislation would create an Ocean and Coastal Resources Management and Development Block Grant Act. That Act establishes a fund from which coastal states could receive block grants for coastal programs. "Block" granting permits the recipient state to use the monies as they see fit. It is the antithesis of dedicated or earmarked funds. The concept for the proposed program is that a portion of revenues derived from the exploitation of non-renewable natural resources from Outer Continental Shelf lands, specifically federal oil and gas leasing revenues, should be used to help coastal states offset the resulting impacts of such development.

The fund is proposed to be established at a level of approximately $300,000 annually, depending on OCS energy development activities. The individual coastal state share would be determined by a formula which considers the magnitude of energy related activities (leasing and production) off its shores, the state's shoreline mileage and coastal population. The monies would be used by the coastal states to support state management of ocean and coastal zone development, including coastal zone management activities, fishery management, and other natural resources enhancement programs. There is no earmarking for particular programs; however, this would be left to the discretion of the individual states.

General Taxation

The third area of funding state fishery programs that I would like to discuss is general taxation. Presently, the states receive on an average 8% of their income from general taxation sources. The concept of user-pay taxes generally extends to the consumers of renewable natural resources (in this case fisheries). Perhaps the term benefitors-pay would be more appropriate than user- pay. Fishery programs provide benefits to a broad segment of society. Fishery management programs result in esthetic improvement and access to the aquatic resource that benefit fishermen and non-fishermen alike. Therefore, a share of state fishery management agency budgets should be derived from general taxation so that all the benefitors pay. General taxation is also the area which should provide monies to fishery agencies to compensate for those exempted from buying fishing licenses as discussed previously.

An interesting general taxation program is the 1/8 of 1% sales tax levied by the State of Missouri with the receipts therefrom dedicated to conservation programs. The conservation programs benefit fish and wildlife management programs alike and is based on the fact that a broad range of benefits accrue to society from these programs. Receipts from this tax are approximately $30 million annually divided among fish, wildlife and park programs.

Other Revenue

In the last category described as "other" revenue sources include such things as user fees, fines, product sales, interest income, state income tax check-off and miscellaneous. Of all these areas the one with the greatest potential for increasing monies for fisheries management is the income tax check-off provision. Thirty of our 50 states now have non-game check-off programs in operation. This program provides state income tax payers an opportunity to donate a portion or all of their refunds (over-paid taxes) to the

state fish and wildlife agencies for non-game management. (NOTE: Not all 50 states have an income tax -- this program is only applicable in states which have an income tax.) Although these monies would be available only for the non-game fish species it can be argued that many fishery management programs currently benefit non-game fisheries; basically, the prey species and the predator-prey complex. For example, monies originating from license sale receipts that are enumerating and identifying non-game species, studying their life histories and habitat requirements could be supported by non-game funds. Fishing license monies currently used for such projects would then be available for recreational fishing projects. There is a need for inventories of non-game fishes and research of their role in the aquatic food chain. This is an example of broad benefits that accrue to society from fishery management programs and it is a start of a broad spectrum of society paying its fair share.

Another source of "other revenue" is import duties paid on fishery products (including fish, shellfish, mollusks, crustacea, aquatic plants and animals and any products thereof). The Saltonstall-Kennedy (S-K) Act provides that 30 percent of such duties collected under the custom laws of the United States shall be used to: 1) promote the flow of fishery products in commerce; 2) develop markets for domestic fishery products; and 3) conduct biological or technical research pertaining to American fisheries. This fund has been at about $10-$12 million annually and has been generally applied to commercial fisheries. Recently, some S-K monies (about 5%) have been used for recreational fishery development programs.

Commentary on Funding

Fishery resources are common property and hence, their management, largely the responsibility of the federal and state governments. Management of the public fishery resource with private capital is not a reasonable alternative. Management costs must be born by the public, most everyone will agree with that. The question is how to equitably assess the costs to the various segments of the public? The funding of fishery programs in the United States over the years has been opportunistic and have been reflective of prevailing political circumstances. Hence, the fishery manager must be cognizant of prevailing or evolving political moods. For example, the previously mentioned 1/8 of one percent sales tax adopted by Missourians by ballot referendum in 1976 would not likely survive a vote at the present time. Although deserving of funds from general revenues both at the state and federal level fishery programs shall go wanting. In times of tight budgets, fisheries do not compete effectively against social programs.

If funding is to be obtained through imaginative funding programs, a strong case of justification will have to be made. Given that strong cases are developed around hard facts, fishery managers must begin developing strong socioeconomic data bases. Although biological facts are important, it has been socioeconomic data which provides the ammunition to compete effectively against programs seeking limited tax dollars. Therefore, it is suggested that proper attention be paid to the collection of socioeconomic data under the auspices of existing programs.

An example of this is the use of Dingell-Johnson monies (part of the eight percent reserved by the Secretary of the Interior for administrative purposes) to collect socioeconomic data. Every five years, beginning in 1955, the U.S.

Fish and Wildlife Service conducts a national survey entitled "The National Survey of Fish, Wildlife, and Wildlife-Associated Recreation" to establish the number of fishing, hunting and associated recreation participants and a schedule of their expenditures. About one third of the seven million dollar survey is paid for with D-J monies, the remainder comes from hunter-generated revenue.

Although the bulk of my comments have dealt with the states, there are considerable numbers of dollars spent by federal agencies on fisheries. However, the monies cannot be easily separated into recreational or commercial fisheries. Federal monies are also spent on such programs as pollution control, endangered species programs, marine mammal protection and aquatic biology. These programs are spread among federal agencies such as U.S. Fish and Wildlife Service, Bureau of Land Management, National Park Service, Bureau of Reclamation (all of the Interior Department); the National Marine Fisheries Service (Department of Commerce); Environmental Protection Agency; U.S. Corps of Engineers, (Department of Defense); U.S. Forest Service and Soil Conservation Service, (Department of Agriculture); and Department of State.

Of the aforementioned agencies, the Fish and Wildlife Service and the National Marine Fishery Service have the most direct link with recreational fisheries. Dr. Robert F. Hutton of NMFS is on the Conference program and he will tell you about their aggressive marine recreational fishery policy. The U.S. Fish and Wildlife Services' fishery resource program has diminished significantly in recent years while they have strengthened and increased funding of the wildlife resources program.

I chose to concentrate on state fishery programs because they are clearly limited to recreational fisheries. Some federal programs, as in the case of NMFS, can be of direct benefit to recreational fisheries. However, there is a strong political movement in the United States to reduce federal expenditures. That translates into immediate and deep cuts in federal fishery programs as exemplified by the reduction in the U.S. Fish and Wildlife Service's fishery program over the past three years. It points out the precarious nature of funding long-term fishery programs through an annual appropriations process.

Earlier, I mentioned "block" grants. I would like to expand on that point. The Reagan Administration strongly supports the concept of block grants. Block grants give federal monies to the states with no strings attached. Within reason, the monies can be spent for whatever, and since fishery programs are not as high in priority as social programs they will receive little, if any, unrestricted monies. The security of any fishery program is dependent on building safeguards into the funding mechanism. The vulnerability of fishery monies to political whims must be reduced. That can only be accomplished by dedicating the monies with the protection of law. An example is the aforementioned D-J Act. In addition to providing funds for recreational fishery programs, the D-J Act requires each state to certify annually that none of their fishing license receipts have been diverted for other purposes.

Discussion

John Clarke: I have two questions, one for Dr. Hutton and one for Mr. Radonski. Dr. Hutton, Canada is quite well into the production of acid rain and it promises to actually increase unless we change our attitudes. So with reference to your fisheries enhancement programs, does that include the abatement of acid rain? And Mr. Radonski, you were saying that a lot of money came from the sporadic angler who bought short term licenses. What would happen if you had nothing but daily licenses? What would hard core anglers do? Would they back away and fish less?

Dr. Hutton: We have certain research responsibilities within the National Oceanic and Atmospheric Administration not directly related necessarily to fisheries itself, and we do have some research going on in that area. The states themselves have certain research programs that deal with this. It is a complex problem and there has been federal legislation proposed in the United States, but there is little agreement as to how we go from here. It is a divided responsibility within the United States between the federal government and the states.

Gil Radonski: I don't think the hard core anglers would back off. There has to be research in licensing. Every state has complex procedures and they get consumer resistance, but there has not been a good survey of what constitutes consumer resistance in buying a fishing license.

Bob Wowchuk: Mr. Radonski, I take great joy in reading where you state, "I do not understand the Canadian fiscal system, either at the Federal or Provincial level". Believe me, you are not alone in that. I am also at a loss in understanding a lot of your programs. I would like to know if aside from DJ funds, are individual states then allowed to implement their own programs to generate revenues and can they use those funds aside from anything else that happens with the DJ and other funds?

Gil Radonski: Yes, they can set up whatever kind of restrictions they want. There is a certain degree of elasticity in what the user will pay and I think if the federal government, through it's programs, pre-empts part of that, it leaves very little to the states to go after in their own programs. But many of these programs are cost-sharing with the states so the states do benefit with the federal government collecting the fees at one time rather than 50 states setting up individual programs.

Bob Wowchuk: If state programs are raising revenue for the benefit of the resource management, will that be prejudicial to any of the funding mechanisms that are implied within the DJ funds and SK funds; in short, lead to a cut-back?

Gil Radonski: No, it doesn't work that way. You do have a system where they only receive monies back in proportion to their licensed anglers and so it is to their benefit to license all their anglers which many of them do not do.

Bob Hutton: I want to respond to something that came up yesterday Wilf, when you asked about advisory committees within the United States. In the United States, as far as fisheries and oceans and atmosphere, we have two major advisory bodies. One of them we call MAFAC which is the Marine Fisheries Advisory Committee and this is a Secretary-appointed advisory committee. The

other one is NACOA, which is the National Advisory Committee on Oceans and Atmosphere. By law these advisory bodies have an approved charter and the approved charter specifies very particularly what they are to do. For example, on MAFAC, there is a maximum number of 20 members as well as a minimum number of 15. The different constituency groups have to be represented on that body. For example, we have the recreational fishermen, we have the commercial, and this is on a nation- wide basis. We have the processors, the harvesters, the state directors; we soon run out of some categories, but we have the universities and major conservation organizations both at the national level as well as the regional level. And I would like to point out that notices of advisory committee meetings must be printed in the Federal Register, and organizations like SFI and others make this information available to their constituents. Any in-camera sessions must be printed ahead of time, to point out why the in-camera sessions are being held.

Jim Gilbert: Gil, could you give us a ballpark figure as to the licence fee level that will bring about consumer resistance and a leveling-off on what the traffic will bear regarding payment for a fishing license?

Gil Radonski: The states have recognized that there is consumer resistance so they have devised very ingenious schemes to get around it. Usually you have to buy a general fishing license and that will cost you anywhere from $2 to about $12. And then, they know that they are going to lose you if they get much above that $10 figure, so they go into the issuance of specific fees for stamps. A general license will offer you the right to buy a stamp if you want to trout fish, if you want to salmon fish or if you want to fish for striped bass in certain states. I think the highest one to fish for everything for an individual is the state of California which is about $17.50. The leveling off point on the basic license is about $10 in my personal opinion. When you have got to break a $10 bill you start thinking twice. Especially if you are just going to go fishing once. The cost is generally much higher for non resident fishermen and so to get over that basic consumer resistance rather than buying a full season fishing license they offer short term non resident licenses like 3 day, 1 day, whatever, at a much reduced fee where they know they can get under that consumer resistance.

CONFERENCE PROGRESS REPORT
WEDNESDAY, FEBRUARY 15, 1984

Archie Tuomi: I am going to take the liberty of saying a few things that a Chairman is supposed to say by way of a progress report with respect to the first two days. I have three reasons for giving you this progress report. First of all, I don't want the levels of frustration with regard to impatience to get things done and resolved to rise too high. Our impatience might impede what we are trying to accomplish here. A second reason is yesterday was Valentine's Day and yesterday was a bit of a killer of a day in terms of what we did; consensus by exhaustion simply doesn't work very well, everybody gets tired and it is just not a good way to do things. The third reason I will leave until last. However, it is also easy to overlook how much we accomplished yesterday. First, I think everybody is a winner and the funny thing about everybody being a winner is that it did not come about by anyone being a loser. We are all ahead of the game. On Monday our Minister of Fisheries made history when he, through conviction and commitment, became the first Minister of Fisheries for Canada to say that the sport fishery was to be fully recognized. With a lead-off statement like that, how can we be anything but winners? Second, I would like to identify some of the winners. The Canadian Wildlife Federation on Monday staked out their aspirations to become, with the help of their affiliates, the voice of Canada's organized anglers. I didn't hear anyone really question that; in fact late yesterday I thought I heard somebody on the other side of the table say, "you've got the job, why don't you do something about it!" Now that is progress. Yesterday was a killer, and amazingly enough, it was largely because I misread my provincial colleagues. I haven't done that very often, but I think each of you, in turn, solemnly told me at one stage or another that, "Gosh, we are going to be expected to talk about policy and I am in no position to talk about policy. What I can say on the subject, with respect to my government's policy, can be said in 3 minutes". Unfortunately, I took them at their word and they completely baffled and fooled me by everyone taking the full 15 minutes and they could have used an extra 15 minutes. With that type of commitment and dedication how can you lose? But it sure fooled me and we had to compress our program and limit questions. Both Monday and yesterday we heard a lot from the sport fish industry people. While everything wasn't fully accepted, they staked out a pretty important position. Bob Wright in his way, Roger Liddle in his way, John Clarke in his way, and I think all of you have established yourselves as serious spokesmen in these matters at future conferences. It is possibly also important to point out what didn't happen is probably as significant as what did happen. One of the traditional ways of getting into trouble is that somebody raises the jurisdictional issue and makes a mountain out of a molehill. Certainly it was obliquely identified, but I think everybody is already agreed that we can get around that issue. I couldn't overlook some of the cross-Canada linkages that became apparent. I heard Wilf Carter and Bob Wright kidding each other that they must have collaborated in their presentations. That is a rather interesting situation. I heard the Sport Fishing Advisory Board, in effect, raise it's sights and recognize itself as a major regional voice and a major national partner in speaking on behalf of the industry across Canada. I think there is a recognition that a lot of the organizations are now linked as major voices across Canada in this respect. Finally, I would like to say that my third reason for saying all this is I heard Dick Roberts assure Victor Rabinovitch that these are fun conferences. Well, yesterday wasn't really fun. It was productive, but it wasn't fun, and I would like to assure everybody that we have already accomplished a great deal more than we realize, and that we should relax a bit and start enjoying the conference.

PANEL 1

SPORT FISHERIES DEVELOPMENT OPPORTUNITIES

Chairman: Terry O'Reilly
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Over this past four years working in a support role at the Cabinet Minister level, and trying to work often for real change in an environment, the nature of which causes it to firmly resist change, I've learned that governments think in economic terms. Even when dealing with matters which are clearly classified as social, governments think of them in economic terms. I don't know if this means that every time someone in government thinks, it costs us money, or just what, but that is how it is. It may not be fair, and it may not be right in some instances, particularly in connection with a wholesome activity like sport fishing which is a legitimate and important social activity. It is also a simple truth that governments express themselves in the ways they spend money. So I will suggest that our thought processes go beyond mere consideration of the opportunities themselves to consideration of having those opportunities acted upon. To conclude this introduction, I think I'm entitled to quote from the Minister's speech to this conference on Monday evening, and say, "by any reasonable assessment sport fishing is a major economic asset. An indispensable centre piece in Canada's national recreational and tourism industries. The time has come to manage and develop it to its full economic and social potential."

Canada's Sport Fisheries: Opportunity that Lingers

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Introduction

Change never comes easy - whether we talk about a nation or a region's economy, about the social fabric of a people or culture, or the leisure time activities that involve individuals and families. Change may not always be welcome but it arrives nevertheless. In the 30's and 40's, Canada came into the true age of industrialization, in the 50's and early 60's urbanization was the most dominant force in the country, and in the late 60's and 70's the new technological revolution began to change both the structure of occupational and leisure time. While the growth in disposable income and leisure time will slow down during the 80's, the tone of leisure time enjoyment will continue in outdoor activities such as boating, skiing, camping and recreational fishing.

As Canada has changed over the last fifty years so has the leisure activity of recreational fishing. Population shifts from rural to urban areas, the transformation in occupational structure allowing more leisure time, and the technological revolution, which brought tremendous increases in personal mobility, have all contributed to a changing sport fishery. With more disposable income, leisure time and mobility (in the form of boats and motors, recreational vehicles, campers etc.), Canada's rivers and oceans have become

more accessible to those participating in the sport fishery. This growth, along with environmental and fisheries resources changes, have contributed to many of the resource management problems in the fishery today.

Environmental changes started to significantly effect the environment in many areas of Canada during the first few decades of the 1900's. In the early years, agricultural and forestry activities in many watersheds caused severe erosion that resulted in increased deposit of soil into streams, lakes, and river mouths. Intensive agricultural expansion increased this problem. Mining and manufacturing developments established themselves in close proximity to water bodies which provided access to the available water and transportation medium necessary for their success. In the last 30 years, heavy industry, thermal and nuclear power plants, along with chemical toxins and the effluent from an ever-expanding population, have created even greater changes in water quality. This changing water quality, along with poor land use planning, inadequate coastal zone management and rampant urbanization have all contributed to deterioration in both the quantity and quality of fisheries habitat.

Partly as a result of these factors and partly as a result of man's intervention, changes in both species mix and numbers have occurred. These habitat and species changes have created shifts in the sport fishery. For example, in many water-sheds of central and eastern Canada; Atlantic salmon and speckled trout have given way to rainbow and brown trout fisheries; in some of the Great Lakes Pacific salmon introductions have replaced lake trout, muskie and pike populations, the traditional top predators; and in central British Columbia landlocked sockeye salmon have created an enjoyable kokanee salmon fishery. Some would perceive these as positive, some would not.

The Sport Fishery

But, while there have been some changes in the nature of the sport fishery, the basic composition of the activity remains the same. Sport fishing can be broken down into two segments:

(a) the recreational activity and those involved directly with it; and,

(b) the industry which both supports and provides technological improvements to better the activity through the manufacture and distribution of items used in the recreational fishery.

The first segment includes a variety of different groups. Firstly, the angler himself; whether it be a youngster fishing for connors from a wharf, a group of anglers trolling for walleye on a lake, a family fishing for lake chub or whitefish through a hole in the ice, or a steelhead or salmon fisherman casting his fly in a river. While the capture of a couple of fish, or perhaps a trophy, is certainly on their minds, their main reason for being there is to be outdoors in a pleasant environment sharing their experience with friends and being able to take in the beauty of nature. Secondly, this group includes the casual non-consumptive user who enjoys watching a salmon or a trout jump a waterfall or the passive movement of fish at a local hatchery. Thirdly, there are the professional fishermen, the guides, and outdoor writers, who, while earning part or most of their income in connection with recreational fishing, have a strong personal attachment to the sport. Fourthly, there are the

numerous community, provincial, and national conservation groups who are primarily interested in the preservation and proper utilization of fish and their habitat.

The second segment of the sport fishery focuses on the industry which has developed in support of this activity. Included here are the small marinas which cater to gas and bait sales, the outdoor and fishing magazines, the fishing lodges and charter boat operators, and the large corporations which produce boats, motors, trailers, and fishing tackle. Without the recreational fisherman this industrial infrastructure, and the jobs connected with it, would be significantly reduced. As well, the technological advances that this segment of the industry have created afford the angler a more accessible, enjoyable and sometimes more productive angling experience.

The Other Users

However, in many areas the recreational angler is only one of three groups interested in exploiting the fishery resource. For this reason one of the major issues in fisheries management is the allocation of fisheries resources amongst and between competing and often conflicting users (commercial, recreational, and native food fishermen). Allocation between and amongst these groups have important growth and distributional effects on regional and national economies. If distributed properly and accompanied by both efficient management and controls on fishing effort, good returns to both the users of the resource (commercial, recreational and native food fishermen) and to the owners of the resource (the people of Canada) can be assured.

Apart from their professed belief in the conservation ethic these three major user groups are similar in only one respect: they all make demands for the resource, which, if left unbridled by lack of efforts or other controls, can collectively or singly result in over-exploitation. Apart from this, the groups differ widely: (i) the product is different; for commercial fisheries the product is fish; for recreational fisheries it is fishing, i.e. the experience; and for native food fisheries the product is a combination of fish and the fulfillment of an age-old cultural tradition: (ii) the technology employed differs as a result; for commercial, the emphasis is on technology which can catch large quantities of quality fish, in recreational the emphasis is on maintaining or improving the enjoyment of the experience; for native food fishing it is one of moulding new technological developments in materials into existing harvesting methods. These differences are part of the reason that makes it difficult to allocate resources amongst these groups. However, since the commercial and the recreational fisheries are exploited for economic reasons, it is possible to compare these fisheries on the basis of economic value and impact and to allocate resources accordingly. This allocation cannot be made on the basis of economic efficiency considerations alone. For example, it is not possible to attain economically optimum levels of exploitation immediately, or even in the near future in a number of fisheries in Canada without extensive economic and social disruption. Such changes would create shifts in employment levels of some communities, and in other communities collapse of the entire economic base could occur. Although the native food fisheries has economic value (to native communities as a source of food and in the terms of alternatives foregone in the commercial and recreational fisheries); allocation in this fishery will be made on a basis of historical, and sociological factors, and through negotiations with native communities.

It is obvious that with the demand placed on the resource by these different user groups, along with the upward battle to maintain Canada's fisheries habitat; that planning for increases in both the percentage of time people fish and the number of Canadians and non-Canadians wishing to sport fish will be difficult at the least.

Change Creates Opportunity

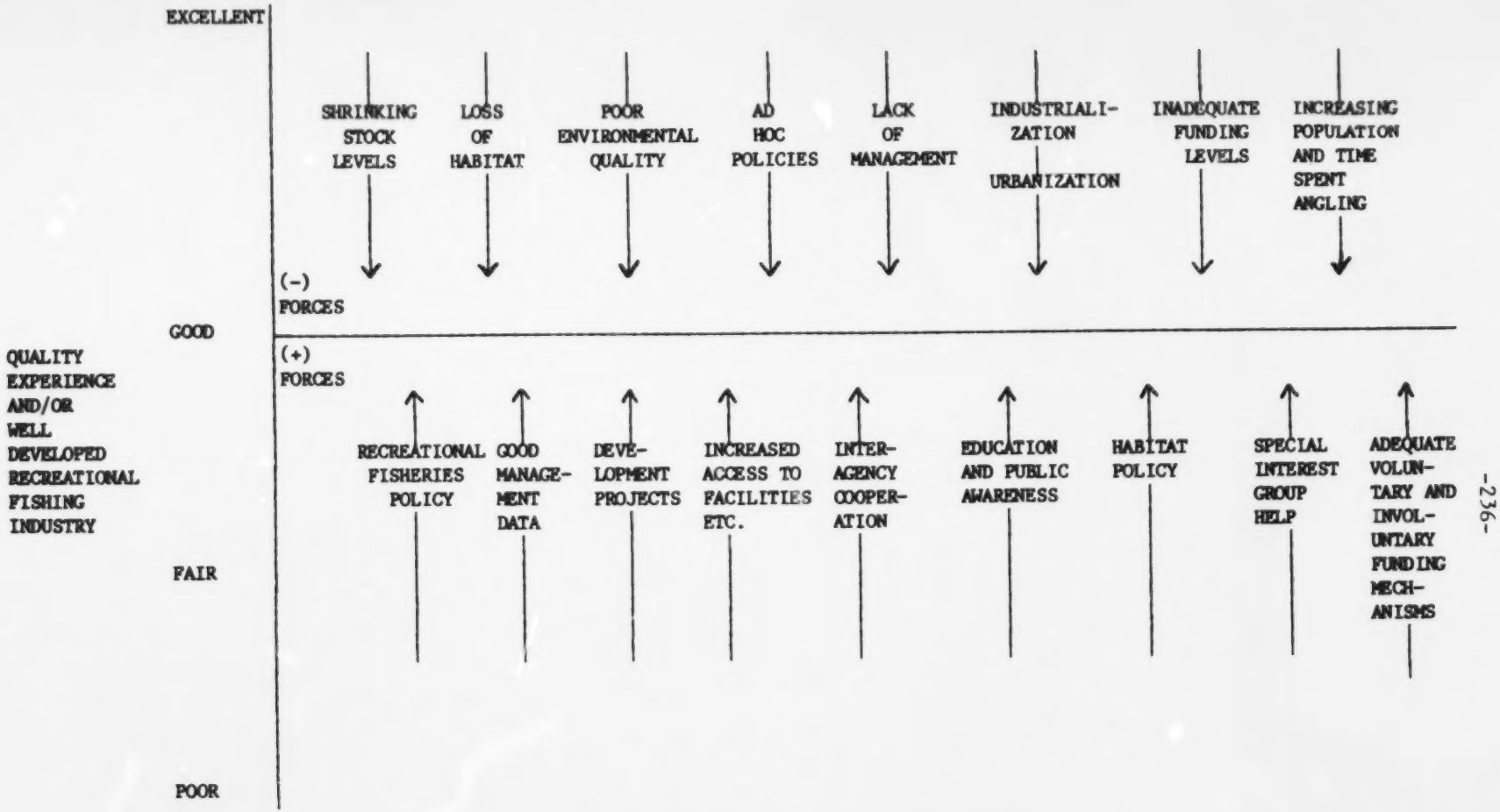
Nevertheless the problems concerned with the management of the resource and the changes which will occur in the 1980's and 1990's do not negate the premise that change creates opportunities, opportunities which still linger in Canada's sports fisheries, opportunities which can be planned and developed. One of these opportunities should include a well-planned and developed recreational fishery throughout Canada. Regardless of jurisdiction, while the reality of well-planned and developed Canadian recreational fisheries can be achieved, it will take all of the various segments and positive forces involved (see forces chart next page) working together constructively to achieve such a goal. Federal government coordination, not only from the Department of Fisheries and Oceans but from other departments involved in economic and social planning, as well as provincial and municipal government coordination, is required. The combined efforts of the corporate sector of the sport fishery, the organized and unorganized angling and conservation groups, as well as the general public, are essential to fulfill such a goal. Whether this is undertaken within or between jurisdictional mandates; public, user, industry and manager; all involved will have to work together as "partners in business" in order to fully recognize and foster the overall best use and development of Canada's sport fisheries.

If some form of this "partnership in business" between the varied management and interest groups can be achieved, the potential of the recreational fishery can be one of considerable opportunity and enjoyment for all concerned. Opportunity exists to strengthen the economic activity based on the sport fishery, to broaden and increase the social enjoyment of the recreational fishery, and to provide for greater consultative mechanism between those who manage the resource and those who use the resource. The following section outlines some of the opportunities which exist for us in Canada.

Opportunity presents itself in different forms and for different purposes depending on our focus within the fishery. Biologic, economic, social, and special development sectors are four broad categories under which we can discuss opportunities for the recreational fishery.

Biologic Opportunities

With the increases in population, in industrialization, as well as the ever-increasing mobility of people to explore woods and water it will be difficult at best to maintain present habitat quality and quantity for fisheries resources. We can however, take better care of the existing habitat and attempt to make sure that further losses do not occur. At the present time, the Department of Fisheries and Oceans is working on a comprehensive fish habitat management policy as part of an effort to pursue a "no net loss" of fish habitat. As well, not all changes in habitat have to be viewed as negative. Positive opportunities can result from some. Eutrophication of a water body is a natural evolutionary process, and as this process continues, albeit it may be spurred by man's activity, a change in species mix can provide new recreational



ANALYSIS OF FORCES AFFECTING THE RECREATIONAL FISHERY

Listed above are a number (by no means all) of the forces that are at work in creating a quality recreational experience and/or a well developed recreational fishing industry. The level of success achieved is measured by the horizontal score line on a scale from poor to excellent. If all the forces that affect either the experience or the industry can be identified, measured, and controlled, then movement toward an excellent experience and a well developed industry can be planned and developed.

opportunities as well as secondary development based around those opportunities. In many urban areas recreational "put and take" fisheries already exist. In most of these areas the natural habitat does not permit sufficient natural reproduction to allow for these fisheries. It is therefore necessary to supplement those existing species in the area, as well as to sometimes provide exotic introductions that are more suitable to that type of water quality and habitat.

As well, we must certainly hope that the problems being created by acid precipitation, toxic chemicals in the water, and heavy bio-degradable effluent load can be reduced over time, thereby contributing to the expansion of quality habitat and water. In Canada, about 75% of the fish angled and kept are eaten by the angler and his family or friends. Maintenance of a quality environment with species of fish that are both palatable and wholesome must remain high on the list of fisheries management concerns. Considerable numbers of fish are eaten through the recreational fishery, and if these are unwholesome public health risks could be significant. As anglers increase both their numbers and percentage of time spent angling, more attention will have to be paid to how this habitat and the various fisheries resources that depend on it are efficiently allocated and used.

Economic Opportunities

Most of Canada's recreational fisheries are non-priced fisheries, i.e. there is no direct charge for access to the right to fish other than a nominal licence fee. Exceptions to this occur in both the Province of New Brunswick and Quebec in connection with some salmonid fisheries, and of course in private reserves where one pays the owner to fish. Determining the economic value of a non-priced resource is sometimes both confusing and frustrating, (although in the discipline of economics the concept is understood). However, in general it is appropriate to say that the value of the sport fishery accrues to the angler himself, based on the quality of the angling experience. To maintain a high level of economic value in the recreational fishery this experience must be maintained and hopefully can be developed. When speaking about economic opportunity, the economic impact which recreational fishing creates through both investment in plant and product in the secondary sector, as well as jobs created can be compared to economic impacts in similar sectors of the economy. More time and care has to be placed on educating the public, users, resource managers and politicians on the economic importance of the recreational fisheries, in order to obtain policy and funding levels necessary to provide for its development.

Sport fishing includes more than catching fish, as many other factors contribute to the sport fishing mosaic. Like other forms of recreation, enjoyment is derived more from the experience than the fish per se. There have been a great number of attitudinal preference studies done on resident and non-resident sport fishermen and while in some of them the number and size of the catch is extremely important, in the vast majority other factors are considered integral to a quality sport fishing experience. These factors include: privacy from other fishing parties, natural beauty of surroundings, ease of access to fishing water, weather conditions, availability of facilities, friends or companions, escape from work and household routine. Thus, when we discuss the value of the quality experience in the recreational fishery, while the allocation of fish tends to be in the front of most managers' minds, a

myriad of other factors that contribute to this experience are more important. Opportunities exist to not only provide sufficient numbers of fish, but also to develop the quality of the angling experience. Enhancement of the experience can be achieved through a number of ways such as providing better access to areas of the coastline, lakes and rivers, educating the angler with regard to under-utilized and often unused fisheries resources, and providing maps and charts to aid in the location of fisheries areas.

The maintenance of quality is also important when discussing the opportunities that exist with regard to economic development based on the recreational fishery. Canadians are one of the most mobile populations in the world, and part of this mobility deals with their desire to pursue different recreational activities. Sharing the border with one of the world's richest and most mobile peoples also provides outstanding tourism opportunities. Expectations are that growth in the tourism industry, albeit far less than during the 1970's, will still exist during the 1980's and early 1990's. This growth, along with a marketing strategy to attract Canadians to other parts of their own country, as well as Americans and other foreign visitors to Canada, is important for not only redistributing money inside Canada, but also for attracting foreign dollars into the country. Indications are that North Americans will be spending more time on combined purpose vacations, on which they can share a number of experiences such as fishing or skiing activities while at the same time learning about a new culture, ethnic groups, or unique landscapes. The ability to plan for these types of vacations as well as to market them properly may be the difference in establishing a tourism industry which can compete with such tourism packages in other parts of North America and the world. While the Government of Canada and the provinces can provide the stability in recreational fisheries policy that is necessary to develop such an industry, private business interests must be called upon to invest in the infrastructure necessary to supply the experiences sought.

Social Opportunities

Our Canadian lifestyle has of necessity, incorporated and reflected the many outdoor recreational experiences that exist across this country. This outdoor heritage has added a rich diversity of lifestyle to both individual, and family-based units alike. Outdoor recreational experiences throughout all four seasons in Canada remain a significant force in Canadian life. One only has to consider the traffic flows from major urban centres on the weekends to be reassured that, while most Canadians live in the city, they like to spend a considerable part of their leisure time in the country. So, for those Canadians who have sufficient mobility, income, and are able to partake of the numerous fishing experiences in their local area and province, the opportunity to be out fishing has always been available.

For the most part, we have been talking about the highly mobile Canadian, one who has the means to travel in order to pursue an experience. However, a great many Canadians who live in cities, and do not have either an automobile, nor the money to partake of a rural recreational fishing experience,would also like to have the opportunity to do so. A number of Canadian cities already have urban fishing programs, and many of these are well used. Whether it is providing a pier out into a lake, or providing a "put and take" fishery in a small pond, the opportunity should exist to provide a more varied recreational experience for this less mobile group of Canadians. As well, there are numerous

special needs groups such as the physically and mentally handicapped, children, and senior citizens who would not only benefit, but would also enjoy special programs for recreational fishing. Most of these special groups have limited mobility and little discretionary income, and would thoroughly enjoy the opportunity to participate in such a recreational pursuit.

Special Development Sectors

There are a number of special development areas which could be mentioned regarding the sport fishery. However, this section will concentrate on just two; charter boats and fishing derbies. One of the backbones in developing a recreational fishing industry can be a sound charter boat segment. While this industry provides the opportunity for recreational fishing, it also hosts excursions concerned with business entertaining, sight-seeing, photography, and diving. Such an industry provides the public with an opportunity to go fishing when they wish, without necessarily having all of the equipment that the ardent angler may have. It also allows the angler to experience a recreational fishing trip through the eyes of an experienced guide who can not only explain the uses and abuses of the different types of fishing rods, reels and terminal tackle, but also can educate the angler regarding the capture, identification and proper methods of handling and releasing game fish. Such an industry is essential to a well-rounded recreational fishery. As well, charter boat operators if amalgamated into a local association, can provide the fisheries manager with an additional source of knowledge of the resource, as well as promoting conservation and wise management through being a direct link with the public.

Another special development opportunity which exists is the fishing derby. Although fishing derbies have been carried on for over twenty-five years in Canada, and provide a definite economic boost to the communities around which they are centred; there are mixed feelings between fisheries management agencies concerning the relative advantages of derbies over the disadvantages. Derbies certainly provide an opportunity to concentrate particular types of biologic, and socio-economic research in a particular spot over a very short time. They also provide an opportunity to put across new, or stress already existing conservation or management practices in a particular jurisdiction. They also afford the non-informed angler, or the person who has not yet gone angling for a recreational activity, a chance to be educated along those lines. However, some managers feel they also can have detrimental effects on a particular stock in an area, whether it is the stock being targeted on or not. Some feel that it prostitutes the age-old sport of angling, by trying to fill your boat or quota with the most or largest fish, and thereby takes away from the reflective, serene pursuit of recreational fishing. Many of these derbies, however, allow only live fish to be used to obtain the particular prize, thereby minimizing the damage to the stock as these fish are released after the derby. However, there are also those derbies which concentrate on the total weight of one or more species captured over a one or two day period. These types of derbies, although they are not concentrating on fish which have a daily limit, can harm a fishery (such as a panfish fishery) which is still important to many. This latter type of derby can remove large numbers of fish from the aquatic food chain thereby creating a ripple effect on the available food for predators higher up the chain. Proliferation of such derbies, their effect on both the sport and the resource, as well as their development opportunities, demand considerable thought.

Potential Growth Through Financial Innovation

The potential for growth or development opportunities in many fields is hampered by inadequate financing. The same holds true for the bulk of Canada's recreational fisheries. In general, recreational fishing in Canada is a bargain. Almost without exception, in studies about anglers, they indicate that they are willing to pay far more for the opportunity to go recreational fishing than they do at the present time. During the 1980's and 1990's the greatest challenge the user, the industry and the fisheries management agencies will have involves coming to grips with how the quality of the experience, and the development opportunities that have been mentioned, can be financed.

One of the major constraints of fisheries management is the diminishing level of funding which is available through government coffers to pay for resource management programs. Expanding use of fisheries resources and the habitat upon which they depend, brings greater pressure to monitor, develop and enforce fisheries management programs. Thus, governments are faced with an increase in demand for service, a static or declining resource level, and a decrease in supply of funding. The time has come to review potential sources of voluntary and involuntary revenue generation in order to generate sufficient funding to provide for both a quality recreational fishing experience as well as help spur development of an industry based on such a fishery.

As a brief summary to initiate discussion, the following is a list of some of the approaches that might be taken to this problem.

Involuntary

Included under involuntary sources of revenue are items that would be mandatory for the user group to pay:

a) licence fees;

b) resource stamp system for particular species such as trout, salmon, groundfish, shellfish;

c) special tagging programs for all or a particular species;

d) licence fees to be paid for holding a derby by the sponsoring agency;

e) an export charge on trophy fish taken out of the province or country;

f) an import surcharge on foreign-made fishing tackle and items.

Voluntary

Voluntary types of revenue generation are discretionary purchases or experiences which are left up to the individual angler's discretion:

a) special lotteries where funds would be dedicated to a particular recreational area or species;

b) special issue products -

- collector stamp series
- Canadian coin issue
- recreational fishing posters
- special fisheries environment book series (for school or home);

c) special use permits for newly-improved or created habitat areas and fisheries;

d) user fees for special or trophy areas;

e) income tax incentives -

- tax deductibility allowance for contribution to habitat reclamation
- tax deductibility allowance for donation to special recreational fisheries development fund.

These funding mechanisms are offered for the purpose of discussion and comment, and, of course, would require significant research, and in many cases, legislative changes at either the provincial and/or federal level before they would be possible.

Conclusion

This paper has outlined, with reference to the recreational fishery in Canada, that although change sometimes creates problems for the management and enjoyment of the fishery, it also creates considerable opportunity to expand and diversify the recreational fisheries experience, while at the same time providing for a recreational industry based on that experience. Over the last decade management agencies have made major advances in setting up advisory groups, holding conservation and management seminars, undertaking community based development programs and attempting to educate the public through increased communication. Consultations between user, industry, and management must be an integral part of planning for our fisheries development. A united effort will be needed to save our fresh and saltwater habitat, and the resources that rely on that habitat, as well as to achieve some of the development opportunities mentioned.

Given proper consultative mechanisms and adequate levels of funding for resource and industry development, the general public, the recreational user, the industry based on the recreational fishery, and Canada's fisheries management agencies should be able to work together as "partners in business" to ensure both a continuing quality experience for the angler, and a solidly based recreational fishery industry.

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Sport Fisheries Development Opportunities in the Atlantic Provinces

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Introduction

One can safely assume that as long as there are fish to catch, there will be a sports fishery. However, major concerns are being expressed by many sports fishermen today that unless action is taken to accommodate the increasing numbers of anglers, by expanding fishing areas and improving level of fish stocks, the opportunities to fish and the quality of fishing will deteriorate. This paper briefly outlines some examples where fish stocks can be expanded and the sport fisheries can be improved.

Recreational Demand

As population, income, leisure time and other factors which influence recreation demand increases, the selection of sports fishing as a desired form of recreation will also increase. Past and projected trends in population growth and related growth in numbers of anglers indicate that immediate steps

must be taken to expand the present stock levels of the traditional game fish and encourage diversification of angling effort to the nontraditional fish species.

Correlations between total population levels and number of resident anglers indicate the potential for continuing growth in recreational fishing in future years. In 1970 there were an estimated 771,000 anglers in the Atlantic Provinces and current growth rates indicate that the number could reach 1,255,000 by the year 2000.

Table 1

Total population and related angler growth in the five Atlantic Provinces. Projected to the year 2000.

Year	1970	1975	1980	1985	1990	1995	2000
Total Population[1] (000's)	8,085.	8,406.	8,672.	9,086.	9,535.	9,848.	10,206.
No. of Resident Anglers[2] (000's)	771.	1,034.	1,066.	1,117.	1,172.	1,211.	1,255.

[1]Population data from 1970 to 1980 taken from past census information. Projected growth to year 2000 calculated from past average growth. (Statistics Canada).

[2]Data on resident anglers taken from sport fishing statistics 1968-1980 (Fisheries & Oceans). Projections calculated from past average growth.

The Fishing Experience

There are a number of factors which are important as elements affecting the enjoyment of sport fishing and reflect the quality of the fishing experience. These factors include privacy, natural beauty, water quality, abundance of fish, size of fish, easy access to fishing, and availability of services and facilities. It is the exception, rather than the rule, to find all of the desirable factors in today's fishing experience. An account of a fishing trip in many areas of Atlantic Canada is likely to report some negative aspects of one or more of the above factors.

The freshwater habitat of the traditional game fishes and corresponding production from it have decreased with the increases in human population density, agricultural intensification and industrialization. The fishing pressure by multiple users combined with an escalation of illegal fishing have contributed to over-exploitation of many of the fish stocks. The selection of sport fishing as a desirable form of recreation in future and the quality of the fishing experience will depend upon the course of events which will lead to acceptance of one of the following options:

1. status quo

2. accept less

3. improvement

Even to maintain the status quo will require dramatic changes in fisheries management and fish habitat management practices. Accepting less will result in significant negative socio-economic impact on the sport fishing industry. Many fishermen are dissatisfied with the quality of fishing today and few are willing to accept less. The target should focus on improvement and on ways and means to attain better quality and opportunities for the sports fishery.

In the provinces of New Brunswick and Quebec there is a combination of public and private access to inland fisheries and it is possible to acquire exclusive use of a fishery through privately owned and leased waters. By virtue of 1922 Federal/Provincial Agreement the administration of fisheries in the inland waters of Quebec has been delegated to the provincial authorities.

Besides the matter of access, a course of action planned for stability and improvement of the sports fishery must take into consideration other areas of provincial responsibility pertaining to alternative uses of watersheds in regard to "land use" and "water use" proposals. A commitment to improvement or expansion of fish stocks could have significant consequences for alternative usage of provincial administered resources of water, forestry, agriculture and minerals. Obviously, there is a need for federal-provincial cooperation and negotiation in the planning and implementation of a sport fishing program.

There is a dire need to develop a comprehensive long-range management and development plan for the sport fisheries of Atlantic Canada and the need for a close, cooperative working relationship between the federal and provincial levels of government cannot be overemphasized. It is also important to include the sport fishing sector in the planning exercise to ensure all anticipatory aspects of the industry are considered. Local community involvement is also necessary in responding to development of any land-use and water-use proposals.

Preferences and Opportunities

There is a wide range of development opportunities that can be identified specific to the sports fishery, but, each endeavour must be properly planned and implemented through the various government agencies and recognizing the preferences of the sport fishing community. The availability of freshwater and saltwater species of fish, the past and current interest in certain species and types of fishing, and the various socio-economic characteristics of the different fisheries will greatly influence which opportunities are most viable.

It is evident from the surveys of anglers conducted in the Atlantic Provinces over the past several years that there has been a high preference for freshwater fishing of trout, especially speckled trout. It can be assumed that this preference will continue in future years. Atlantic salmon is also ranked highly in freshwater fishing and is the most "visible" sport fishery because of special licencing requirements in each of the Atlantic Provinces.

The most critical situation confronting the freshwater sport fishery in the Atlantic Provinces at the present time is the serious decline in the salmon stocks. Because many of the initiatives that can be applied to protect and expand this resource can also be applied to other species, it is for this reason that salmon is discussed in the following sections.

Atlantic Salmon Production Potential

The salmon distribution covers all of the Atlantic Provinces extending from the Bay of Fundy to Ungava Bay. The adult salmon production potential for the total area within Canadian boundaries is 2,050,000 in the accessible and inaccessible habitats combined.

Table 2

Adult Atlantic salmon production potential of Canadian waters[1]

Province	Numbers of adults	
	Accessible	Inaccessible
Newfoundland		
- Insular	430,000	170,000
- Labrador	320,000	140,000
Quebec	300,000[2]	80,000[2]
New Brunswick	420,000[3]	70,000[3]
Nova Scotia	100,000	10,000
Prince Edward Island	10,000	NIL
Total	1,580,000	470,000

1 Information from Salmon Review 1978.
2 Quebec production potential estimates exclude grilse.
3 Excludes production potential of headwater areas in U.S.A. (e.g., Upper Saint John and St. Croix Rivers).

Status of the Resource

The current situation can be briefly stated as follows:

- production from most of the natural stocks is below the potential of the accessible habitat.
- production capability of the freshwater habitat is diminishing.
- dependence on ongoing enhancement measures to sustain production is increasing.

Canadian Harvest Levels

The 1982 harvest of salmon by all authorized user-groups amounted to 623,900 fish being caught and weighing 1875 tonnes. Details of the 1982 harvest are shown in Table 3.

Table 3

1982 exploitation picture

	Salmon harvest		Authorized participants
	Tonnes	Number	
Food fisheries	30	6,400	14 Permits
Recreational fisheries	266	97,500	80,300
Commercial fisheries	1,579	520,800	5,474*

*Excludes Inuit participants at Fort Chimo, Quebec.

Target Level for the Future

For the purpose of improving the stock levels which will benefit the sports fishery in future, it is desirable to select a preliminary level based on highest catch rates from historical data. The highest sports catch recorded over the past twenty years occurred in 1981 for Newfoundland, Quebec, Nova Scotia and Prince Edward Island and in 1966 for New Brunswick (Table 4). A target set at 175,000 fish for the sports fishery can be reached in the foreseeable future providing there are changes in the present harvesting regime and current stock enhancement technologies are fully utilized.

Table 4

1982 versus historical recreational catches of Atlantic salmon

Province	Numbers of Atlantic salmon	
	1982	Historical*
Newfoundland	47,806	54,680 (1981)
Quebec	17,932	24,244 (1981)
New Brunswick	25,116	85,935 (1966)
Nova Scotia	6,572	10,232 (1981)
Prince Edward Island	83	112 (1981)
Total	97,509	175,203

*Highest catch and corresponding year in previous 20 years.

Development Strategies

In areas where stock enhancement projects can be economically justified a variation of strategies can be applied to enhance sport fisheries. Adult salmon transfers, stream-side incubation, hatchery rearing and stocking are some examples of the enhancement technologies which can be utilized. The strategies are more specifically outlined as follows:

1. Colonization of Vacant Habitats

   - Restore stocks to habitats which produced salmon previously.

   - Expand the range of the salmon by opening-up new habitats.

2. Augmentation of Salmon Stocks Beyond the Natural Production Capacity of the Habitat.

   Examples where this strategy could be applied are:

   - in streams/rivers near populated areas and/or in which natural salmon production capability is limited;

   - to mitigate for losses in fishing opportunities because of conservation restrictions;

   - to provide an improved distribution of fishing effort (i.e., in time and/or space); and

   - in rivers where natural reproduction is prevented because of low pH.

3. Salmon Habitat Conservation, Restoration and Development

   - To strive towards "no net loss" of the productive capacity of habitats.

   - To restore habitats suffering from past damage.

   - To improve salmon production capabilities of other habitats.

4. Other Recreational Fisheries Development Opportunities

   1. Extend the practice of hook and release.

   2. Encourage a conversion of the Indian food fisheries to sport fishing enterprises.

   3. Extend recreational fishing activities to tidal areas.

   4. Fine tune regulations pertaining to season timing, area of fishing and catch limits.

   5. Reduce commercial fishing for salmon to enhance stock availability for recreational use.

   6. Fully reinstate and possibly expand black salmon fisheries.

7. Divert fishing effort to other fish species, e.g., rainbow trout, sea-run trout, landlocked salmon, smallmouth bass, striped bass, shad, winter ice fishery.

8. Introduce exotic species.

Summary

Main factors limiting expansion of the recreational fisheries for Atlantic salmon are availability of both the fish and rod-day opportunities.

Objectives should be to maximize the recreational fisheries benefit given availability of the resource and rod-day opportunities.

Diversity in sport fisheries opportunities must be maintained to ensure quality of experience.

Communication and accommodation among different levels of government and sport fishing interest groups are essential to maximizing recreational fisheries benefits from the Atlantic salmon resource.

Re-allocation of Sea-Run Atlantic Salmon and Potential of Landlocked Atlantic Salmon in Canadian Sport Fisheries

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Introduction

The Atlantic salmon is regarded by most anglers as the "king" of sport fish; where present, it is the most highly prized and valued angling and commercial fish species in the world. Two varieties of Atlantic salmon exist; sea-run and landlocked; they are taxonomically identical, but genetic factors decide ocean migration. Landlocked salmon can adapt to ocean-water conditions just as sea-run salmon can live and grow in freshwater and die, never migrating to sea; Jarrams, 1980, successfully held sea-run Atlantic to maturity for brood stock purposes.

This paper suggests how Atlantic salmon should be managed in Canada for best public benefit through re-allocation of the sea-run variety solely for sport fishing purposes and range extension of the landlocked variety.

Resource Collapse

Most populations of Atlantic salmon collapsed in New Brunswick and Quebec in 1971 and again in 1983, the result of continual foreign and Canadian commercial over-harvesting, especially the West Greenland fishery initiated in the early 1960's. The Greenland fishery harvest comprised approximately 40% North American fish and 60% European-origin fish; the majority (± 70%) of fish

harvested were immature females weighing 6 to 8 pound (Lear and Sanderman, 1980). The Greenland harvest expanded to 300,000 North American fish by 1971, whereafter a 1 150 metric tonne quota (166,000 fish approximately) limited the North American catch component to 200,000 salmon. The Greenland catch resulted in an estimated 33 to 75% loss of spawning escapement for New Brunswick rivers in the late 1960's, 1970 and 1971 (Ruggles and Ritter, 1980).

The Greenland quota spared approximately 100,000 additional large salmon to return to Canadian waters. A 1972 commercial fishing ban for New Brunswick and the Newfoundland Port aux Basques drift net fishery, as well as portions of Quebec, further improved adult salmon escapement to New Brunswick rivers until 1977 as indicated by DFO monitoring traps (Table 1). Unfortunately, large expansion (from 17,000 to 22,000 gear units) of the Newfoundland commercial fishery began in 1972, (the Port aux Basques fishery was permanently closed), intercepting additional New Brunswick and Quebec stocks, thereby decreasing spawning escapement especially after 1977 (Table 2), (Bastien, 1984; Atlantic Salmon Task Group, 1984). Although Greenland's fishery quota, initiated in 1975, reduced the Greenland catch, it also provided Newfoundland commercial fishermen with more fish to catch. Large salmon abundance, and hence spawning escapement, was further decreased during 1975-1980 when New Brunswick commercial fishermen adapted their mackerel, shad, gaspereau and cod fishing efforts to "incidentally" catch approximately 20,000 salmon per annum despite the commercial "ban" (Table 2).

By 1978 the above cumulative exploitation had diminished estimated escapement reducing 0+ fingerling populations in New Brunswick rivers to only one-half to two-thirds of habitat carrying capacity (Table 3). At this time, the Faroe Island fishery escalated, intercepting up to 300,000 large salmon (950 metric tonnes) of European origin on route to or returning from Greenland wintering grounds; consequently, because of the absence of European fish, Greenland's 1982 and 1983 (1 150 tonnes) quotas were not achieved (Table 2). The Greenland salmon harvested since 1979 could represent a 70% North American component considering Faroe interception and subsequent huge decline of Greenland harvests.

The resumption of the 1981 New Brunswick commercial fishery further increased exploitation of large salmon stocks mainly due to excessive quota allocations (up to 160 000 kg) of fish including 25,000 large salmon and 25,000 grilse as well as continued incidental catches and poaching, particularly in tidal and ocean waters (Table 2).

New Brunswick Angling Background

Angler numbers have increased only 9% since 1965, whereas angling effort has increased 78%,primarily due to enhanced salmon populations on St. John river drainage (Table 4); a 250,000 smolt production hatchery, a fish lift and upstream trucking operation were undertaken to mitigate the adverse consequences upon completion of Mactaquac Dam in 1967. Resulting hatchery returns to all sport and commercial fisheries and for spawning escapement have been encouraging (2.0% for 1977 smolts to 12% for 1979 smolts); however, transporting wild salmon to spawning and nursery above the Mactaquac Dam represents one of the most successful Atlantic salmon rehabilitation and enhancement projects in North America. Further hatchery enhancement is underway utilizing waste-heat produced by the Mactaquac Power Dam to grow one to three gram fingerlings by June which will more than double subsequent smolt production output (two years to one year old smolts) from the Mactaquac hatchery. Anglers, especially from urban Fredericton and rural Tobique areas responded to the increased stocks of salmon

in 1972 (also the first year of a 9 year domestic commercial fishing ban), increasing angling effort from 10,000 days to 50,000 days by 1980, 60% of the increase occurring on one mile of river below the Mactaquac dam!

Utilization of Angling Statistics to Manage Sea-Run Atlantic Salmon

Angling catches of large salmon (the primary component to spawning escapement and hence future stock abundances) on major New Brunswick river systems is predictable using the previous year's catch per day for grilse (predominantly male, one sea-winter fish) (Figure 1). This relationship, first apparent in 1972, can be utilized to determine numbers of multi-sea winter salmon which will return to New Brunswick waters the subsequent year, providing commercial harvesting, in total, remains approximately the same. For 1984, the N.B. angling catch of large salmon will approximate 2,000 fish, with a spawning escapement of about 6,000 fish on the three major drainages.

Anglers harvest approximately 25% of Atlantic salmon available in major rivers, consequently providing an estimate (catch X 3) of numbers of large salmon and grilse available for subsequent spawning escapement at the termination of the angling season. Required spawning escapement for New Brunswick's three major drainages totals 36,000 large salmon (Randall, 1983; Randall, 1984; Penny, 1984, and Table 5). Considering our 1983 sport catches of large salmon were less than one-half the requirement and 1984 catches will be less than 20% of the requirement (if similar commercial harvesting continues in 1984); consequently, commercial and sport fishermen must be prevented from future harvesting of large salmon until at least 1990 to restore juvenile habitat carrying capacity. Greenland, Faroes and Newfoundland harvests of Canadian fish must be also reduced from 1 6000 tonnes to 400 tonnes. Due to uneven dispersion of adults in rivers and to reduce male grilse competition on spawning grounds, as well as unknown factors always present, spawning escapement of large salmon should be 50,000. Biologists have only grossly estimated salmonid habitat quantity and quality for New Brunswick rivers; considering the extent and importance of small feeder streams, absence of detailed "on site" surveys and limited studies available on what "required" egg depositions should be, as well as the known production potential of some smaller rivers (Big Salmm, Tabusintac, Sevogle, etc.) our 50,000 large salmon escapement recommendation is probably minimal. Moreover, we have insufficient knowledge on exactly what stocks are escaping; do they have the most desirable traits for eventual use by man?

Commercial fishing in New Brunswick cannot again be allowed if this is to be accomplished. Once sufficient escapement is attained to provide reasonable populations of three year classes of juveniles (probably not until 1989 at the earliest), native and sport fisheries can resume harvesting large salmon. Commercial fishing in New Brunswick must be abolished forever, replaced by various types of sport fisheries to provide a mix of angling opportunities designed to maximize use of surplus resource, satisfying social requirements, and where feasible, maximizing economic return. In the unlikely situation too many Atlantic salmon return, native fisheries could harvest these on a stock basis, regulated by seasonal length and a single harvesting location in upper tidal water areas.

The concern of some biologists, i.e. too many returning Atlantic salmon will be harmful, is not valid. New Brunswick's diverse river systems can easily accommodate up to 100,000 anglers, fishing up to 500,000 days, participating in the widest possible range of angling opportunities if sufficient fish are supplied. River habitat in New Brunswick can potentially produce 217,000 large

salmon and 160,000 grilse or approximately 1 455 tonnes (Anonymous, 1978). This potential cannot be attained until at least 1995 and only then if specific management actions are undertaken immediately.

- reduction of the Greenland total annual harvest to 150 metric tonnes (about 47,000 fish)

- reduction of the Newfoundland commercial fishery, primarily in Area J, to 750 metric tonnes

- immediate termination of New Brunswick's commercial fishery, forever

- native food fishery harvests in New Brunswick should not exceed 25 metric tonnes until 1988 and increased thereafter only if sufficient surplus stocks become available; future (post 1990) native fisheries should be allowed to sell their surplus catch

- the New Brunswick recreational fishery should harvest only grilse until 1989; effort should not be increased above 180,000 days (indeed, a grilse only fishery should reduce effort, grilse harvest and angler expenditures by 20 to 30% based on our observations in 1979 when a mid-season grilse-only policy and regulation were implemented); angling participation should be increased after 1988 in approximate proportion to fish abundance, i.e. one angler day per available fish.

Past angling fisheries in new Brunswick, Quebec and Ireland have shown anglers can harvest 25 to 35% of the Atlantic salmons stocks available; some recent river exploitation rates (e.g. Main Restigouche and N.W. Miramichi) have probably exceeded 50%. Elson, 1976, noted anglers could harvest up to 90% of adult salmon stocks on the Foyle River system in Ireland. Improvement in angling exploitation gear and techniques have flourished over the past 15 years with vastly improved rods, lines and flies and widespread use of effective catching methods described in the rapidly expanding angling literature. The average angler is now an effective resource harvester; particularly in smaller (40 to 400 cubic feet per second) rivers.

Should New Brunswick rivers attain near potential production levels in the 1990's, anglers could harvest up to one-third to one-half of fish available. From 325,000 adult Atlantic salmon of N.B. origin produced, a future Greenland fishery may harvest 12,000 fish, Newfoundland fisheries 86,000 fish and native fisheries 27,000 fish leaving 200,000 subject to angling exploitation.

Additional angling effort (up to 300,000 angler days at 0.40 fish/day) could harvest approximately 50% of the fish leaving 100,000 for spawning escapement, one half of which would be large salmon. Additional grilse could be harvested with a grilse only regulation, if necessary. Angling exploitation would not only provide best social and economic returns, but should be regulated to harvest individual stocks using diverse angling water allocations described by Hooper and Hustins, 1973.

Replacement of the Commercial Harvest by the Recreational Fishery

Commercial harvest of Atlantic salmon must be immediately terminated if New Brunswickers and Canadians are to derive optimum social and economic benefits from a future self-sustained resource. A fund should be established

to "buy back" the Provinces 223 commercial licences considering each fishermen's investment in harvesting gears and financial situation. Subsequent benefits to society from sport fishery expenditures and large increases in spawning escapement will exceed "buy back" costs within 5 years.

To illustrate economic and social gain, the 1982-83 New Brunswick mean commercial catch was 153 metric tonnes representing approximately 25,000 large salmon and 6,000 grilse worth about $800,000 of which about $80,000 was for export outside Canada. Substituting a recreational fishery, anglers would have harvested about 25% of the commercially caught fish or 7,700 large salmon and 1,500 grilse. The fish would have generated an additional 30,000 days effort worth $1,500,000 in direct gross expenditures, representing vendor sales of goods and services to anglers. The vendors, like commercial fishermen, usually retain a profit after expenses. Three substantial differences are apparent favouring recreational resource use:

- non-resident anglers (primarily from the United States) would provide 7,500 angler days worth $140/day or about $1 million more than the 1982-83 commercial value! This income to the Province and Canada represents "new" dollars to the economy. Resident angling would account for 22,000 days worth $25/day or $550,000 to vendors. This revenue, like commercial fishing revenue from the resource, is merely transferred from one local or regional economy to another. Resident angling expenditures (vendor revenues) and commercial harvest revenues provided by the resources usually represent transfer of income from urban to rural areas. It is only non-resident angler revenues which contribute net growth to our economy.

- angler use of the resource would have allowed 75% of the fish to escape for spawning escapement; these fish could represent up to one-half of the egg deposition required to populate stream habitat (Table 5).

- angler use of the resource can be regulated per annum, if necessary, through licence sales and specific water allocation; in fact, it seems fish abundance regulates angler participation! As stocks rebuild, more participation is possible offering the best opportunity for economic development in rural regions through marketing the world's most praised and valued sport fish to the world's most affluent societies within a several hundred mile radius of New Brunswick.

Potential Angling Values from a Diversified Fishery

Fortunately, in New Brunswick and Quebec, an allocations structure has been well established ranging from "elbow to elbow" angling to strictly enforced limited entry by four or fewer anglers (Hooper and Hustins, 1972). New Brunswick's many river systems can be much more extensively utilized by anglers, particularly the larger tributary streams. We estimate at least 500,000 angler days could be accommodated through the present angler allocation system.

Provincial quality angling is fundamental if we are to optimize socio-economic benefits. Atlantic salmon anglers are satisfactorily rewarded with a minimum catch per day of 0.40 fish or 0.10 fish per hour (Hooper, 1978). Anglers will accept even lower success rates (down to 0.25 fish per day) but

some participation is discouraged, especially non-resident. A catch per day value of 0.20 or less discourages angling participation during the season, the trend carrying over to the following angling season. The exception is for salmon rivers near urban areas where catch per effort ratios as low as 0.05 fish per hour do not discourage resident angling, e.g. Nashwaak River near Fredericton. Our angling quality ratios are similar to those reported by Smith, 1980 for steelhead angling in Oregon. The poor catch per day (0.19) for the 1982-83 combined seasons is sufficiently low not only to discourage future angling participation, but for the first time since 1970, illustrates a decrease in angler day expenditures (Table 6). The expenditure values cited in Table 6 are not intended to show a direct value of worth of past salmon angling. The expenditures do indicate the size of economic activity generated in New Brunswick, representing a minimum estimate of the net value of angling to the Province since consumer surplus valuation, "spin off" values, licence revenue and private water valuation (including capital values ranging $70-110 million; Hooper and Hustins, 1973; Tuomi, 1980) have not been included.

The Atlantic salmon resource in New Brunswick, if allocated to the sport fishery, could generate up to $50 million per year gross expenditures by 1995, $35 million of which would be expenditures by non-residents representing less than 25% of the total angling effort (Figure 2); sufficient spawning escapement and angling quality could also be maintained. Consequently, termination of commercial fishing will achieve the Province's primarily goal: maintain angler satisfaction while maximizing economic value and minimizing the risk of over-exploiting New Brunswick's Atlantic salmon stocks.

Table 1. Grilse and salmon relative populations indices from DFO trap monitoring operation, 1954 - 1983.

RIVER DRAINAGE

	St. John - Mactaquac Fish Lift			Miramichi - Millbank Trap			Restigouche - Dalhousie Trap		
Year	Wild Grilse	Wild Salmon	Wild Fish Both	Grilse	Salmon	Both	Grilse	Salmon	Both
1954									
1955				1,833	2,130	3,963			
1956				1,807	2,846	4,653			
1957				3,433	3,361	6,794			
1958				4,041	3,865	7,906			
1959				8,402	4,370	12,772			
1960				2,102	4,321	6,423			
1961				4,469	4,531	9,000			
1962				6,852	2,989	9,841			
1963				2,975	1,915	4,890			
1964				14,108	1,639	15,747			
1965				8,873	1,007	9,880			
1966				15,581	1,801	17,382			
1967	1,181	1,271	2,452	9,989	1,632	11,621			
1968	1,203	770	1,973	7,720	1,000	8,720			
1969	2,572	1,749	4,321	3,214	1,414	4,628			
1970	2,858	2,465	5,323	4,340	667	5,007			
1971	1,574	2,266	3,840	2,484	245	2,729			
1972	784	4,831	5,615	1,962	394	2,356			
1973	1,854	2,367	4,221	2,543	1,151	3,694		1,556	1,556
1974	3,389	4,775	8,164	2,450	1,132	3,582	326	1,170	1,496
1975	5,725	6,200	11,925	4,038	1,791	5,829	700	950	1,650
1976	6,797	5,511	12,308	3,548	1,208	4,756	1,275	1,430	2,705
1977	3,506	7,247	10,753	4,939	943	5,882	1,087	1,249	2,336
1978	1,584	3,034	4,618	1,505	1,934	3,439	477	842	1,319
1979	6,234	1,993	8,227	1,268	693	1,961	510	1,493	2,003
1980	7,555	8,157	15,712	2,500	318	2,818	961	762	1,723
1981	4,571	2,441	7,012	2,139	1,093	3,232	496	1,073	1,569
1982	3,931	2,254	6,185	2,174	199	2,373	Trap discontinued in 1980		
1983	3,613	1,711	5,324	2,665	408	3,073			
1984				810	245	1,055			

Table 2. Commercial harvest of Atlantic salmon 1951 - 83 (metric tonnes).

	Year	Canadian Harvest: New Brunswick	Nova Scotia	Nfld.	P.Q.	TOTAL	Greenland Harvest: European and North American catch total	Estimated Canadian Component Pre 1980 = 45%;Post 1979=70%	Total Canadian Harvest Including Estimated Greenland Component *
	1951	336	119	1520	362	2337			2,337
	1952	325	97	1549	360	2331			2,331
	1953	317	123	1404	305	2149			2,149
	1954	399	103	1070	236	1808			1,808
	1955	158	58	796	201	1213			1,213
	1956	191	62	748	211	1212			1,212
	1957	227	66	893	202	1388			1,388
	1958	278	93	979	231	1581			1,581
	1959	357	95	1066	295	1813			1,813
	1960	291	109	949	287	1636			1,636
	1961	274	127	951	231	1583			1,583
	1962	333	142	1017	227	1719			1,719
	1963	301	137	1217	196	1851	466	210	676
	1964	482	114	1268	204	2069	1539	693	2,232
	1965	559	133	1164	259	2116	861	388	1,249
	1966	565	127	1399	268	2359	1370	617	1,987
	1967	656	154	1822	227	2860	1601	721	2,322
	1968	375	102	1445	193	2115	1127	507	1,634
	1969	268	79	1441	173	1961	2210	995	3,205
	1970	263	60	1595	174	2092	2146	966	3,112
	1971	124	31	1576	104	1835	2689	1210	3,899
**	1972	17	59	1395	60	1532	2113	951	3,064
**	1973	9	52	2008	86	2155	2341	1054	3,395
**	1974	5	87	2011	136	2241	1917	863	2,780
**	1975	12	78	2044	113	2249	2030	914	2,944
**	1976	19	55	2012	120	2208	1175	529	1,704
**	1977	39	80	1939	99	2160	1420	639	2,059
**	1978	48	73	1179	80	1380	984	443	1,427
**	1979	25	27	986	51	1091	1395	977	2,068
	1980	66	90	2104	430	2680	1194	836	3,516
	1981	109	42	1895	704	2750	1204	843	3,593
	1982	87	59	1314	89	1549	1077	754	2,303
	1983	217	40	1017	101	1375	310	217	1,592

* The Canadian component of fish caught would weigh 1.6 x larger if allowed to return to Canadian waters from growth achieved on route.

** Commerical ban years in New Brunswick

Table 3. Estimated Atlantic salmon egg deposition (extrapolated from angler catch of large salmon) and subsequent years mean fingerling populations (fish/100m^2 from electrofishing estimates) for Miramichi, Restigoucne and St. John drainage.

Recommended Egg Deposition - 220 eggs/100m^2 *
Recommended mean fingerling populations: 40 fingerlings/100m^2

	Miramichi Dng.		Restigouche Dng.		St. John (Tobique)		Main Nepisiguit	
Year	Previous yr. egg deposition/ 100m^2	Estimated fingerling pop./100m2	Previous yr. egg deposition/ 100m^2	Estimated fingerling pop./100m^2	Previous yr. egg deposition/ 100m^2	Estimated fingerling pop./100m^2	Previous yr. egg deposition/ 100m^2	Estimated fingerling pop./100m^2
1963						0		
1964						0		
1965						7		
1966						8		
1967						7		
1968						27		
1969		6				7		
1970	105	13				35	7	1
1971	91	15				53	10	-
1972	50	5	31	5		29	25	17
1973	248	17	125	17		43	12	7
1974	166	23	138	13		25	12	6
1975	199	32	197	31		-	5	-
1976	174	22	91	15		71	72	7
1977	204	34	102	19		21	84	8
1978	322	24	145	23		10	40	7
1979	136	13	119	11			25	
1980	74	20	36	11				
1981	181	41	187	17				
1982	90	9	152	8				
1983	128	31	69	34				
1984	62		39					

* Symons, 1978; however, considering the prime habitat offered by most New Brunswick rivers, it is unlikely that 220 eggs/100 m^2 is adequate deposition.

Table 4. New Brunswick's Atlantic salmon sport fishery statistics.

YEAR	NO. OF ANGLERS	EFFORT	TOTAL CATCH	CATCH/ROD-DAY
1950	-	50,899	49,751	0.97
1951	-	-	-	-
1952	-	56,071	43,254	0.77
1953	-	65,058	43,853	0.67
1954	-	63,724	45,588	0.71
1955	-	71,576	33,040	0.46
1956	-	74,132	44,179	0.60
1957	-	63,998	36,374	0.57
1958	-	85,805	59,854	0.70
1959	-	71,967	27,861	0.39
1960	-	100,228	21,252	0.21
1961	8,609	62,829	22,720	0.36
1962	9,883	85,871	26,821	0.31
1963	11,529	84,328	73,071	0.87
1964	16,365	90,679	54,046	0.60
1965	19,695	87,644	65,558	0.75
1966	21,029	100,069	84,589	0.85
1967	20,751	92,292	75,002	0.81
1968	20,939	74,357	27,373	0.37
1969	18,982	76,731	43,009	0.56
1970	16,570	86,048	34,537	0.40
1971	9,845	65,762	23,255	0.35
1972	12,105	84,798	37,113	0.43
1973	14,465	95,938	32,183	0.34
1974	15,654	99,259	40,916	0.41
1975	16,828	104,583	34,707	0.33
1976	18,757	113,610	51,243	0.45
1977	21,252	121,903	44,735	0.37
1978	21,141	128,535	25,405	0.19
1979	20,839	119,130	28,799	0.24
1980	20,633	135,407	41,758	0.31
1981	21,964	157,474	47,540	0.30
1982	22,535	161,028	43,974	0.27
1983	22,397	178,007	21,395	0.12

Note: 1950 - 1968 statistics from DFO, Halifax, N.B.

1969 - 1983 statistics from New Brunswick Department of Natural Resources, Fredericton, N.B.

Table 5. Comparison of required spawning escapement of large salmon as per CAFSAC, 1983 and the estimated escapement for 1983 and 1984.

DRAINAGE	REQUIRED SPAWNING ESCAPEMENT OF LARGE SALMON *	ESTIMATED SPAWNINNG ESCAPEMENT OF LARGE SALMON **		
		1967	1983	1984 ***
Saint John	10,400	714	3,450	900
Miramichi	13,400	19,839	6,720	3,300
Restigouche	12,200	7,470	2,130	1,200
TOTAL	35,600	28,023	12,300	5,400

* as per CAFSAC documents 84/16, 84/47, 83/99.

** assume sport fishery removes 25% of the large salmon not captured in the commercial fishery

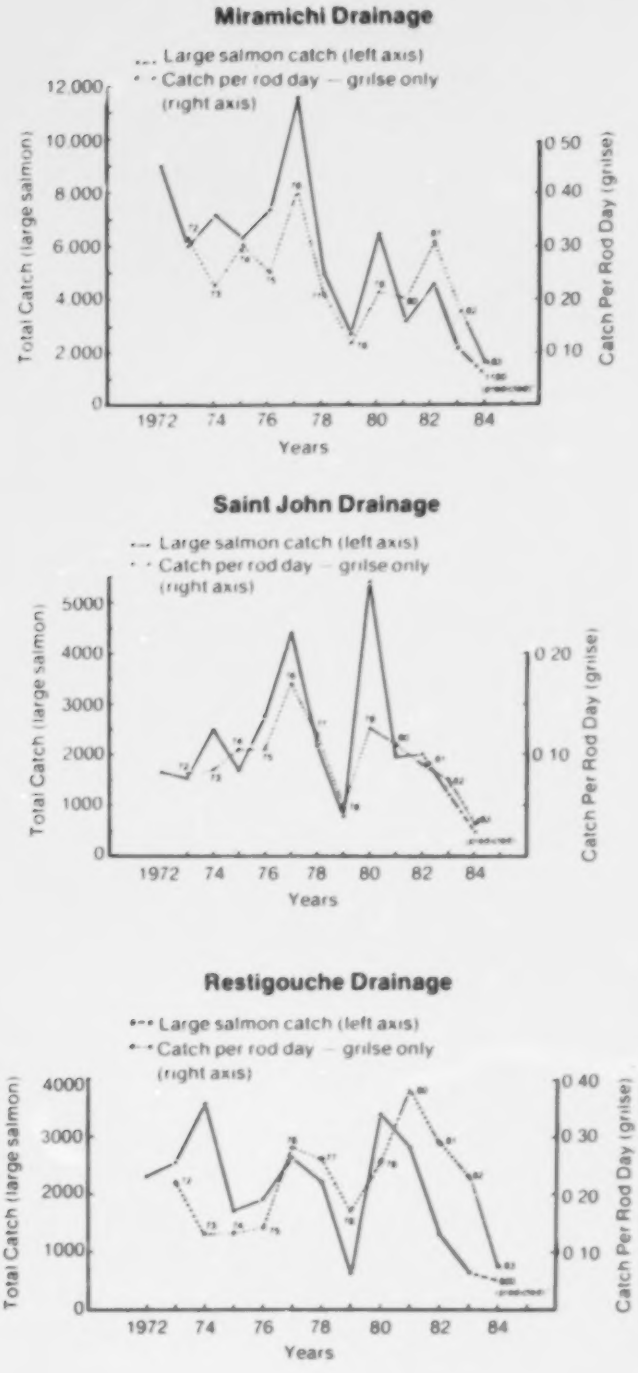
*** assumes no change in commercial exploitation trends

Table 6. Angling catch, effort and expenditures for the New Brunswick Atlantic salmon sport fishery, 1970-1983. (Note: mean year values are used for catch, effort, and catch per effort to compensate for fluctuations in the sport fishery.)

Years	No. Anglers	Catch	Days Fished	Unweighted* Expenditure Per Angler	Unweighted* Value Per Fish**	Value Per Day Fished	Catch per Day
1969-1970	17,776	38,773	81,389	$ 292	$ 134	$ 63	0.47
1974-1975	16,241	37,811	101,918	517	222	82	0.37
1979-1980	20,736	35,278	127,268	622	365	101	0.28
1982-1983	22,466	32,684	169,517	738	507	97	0.19

* non-resident salmon anglers spend four to six times more than resident salmon anglers; non-resident expenditures represent a transfer of benefits and increased economic activity to the N.B. economy.

** value per day represents value all anglers spend on direct and indirect purchases; since consumer surplus and other values have not been calculated, indirect purchases are utilized to represent a minimum value of the sport fishery.



NOTE: Represents only New Brunswick catch; does not include Province of Quebec catch, which is similar.

Figure 1. Catch per rod-day of grilse one year to predict large salmon catch the subsequent year; since anglers usually harvest 25% of the large salmon available, spawning escapement can also be predicted by multiplying by 3.

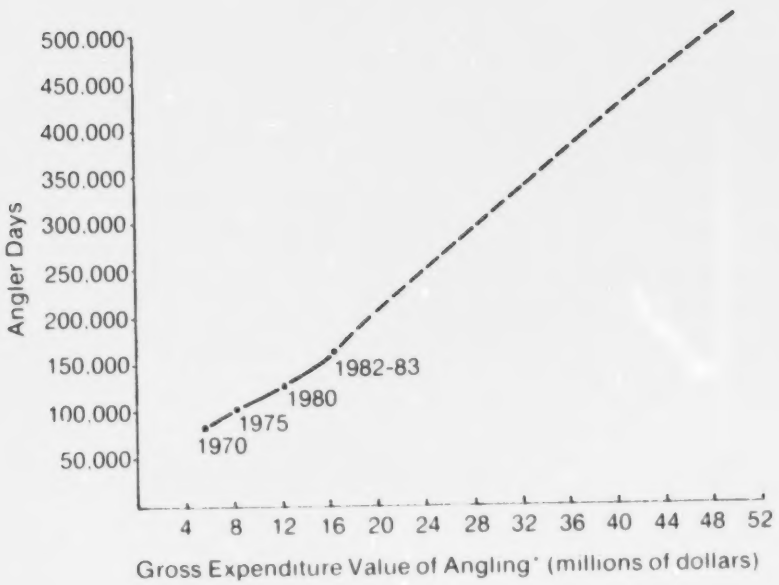


Figure 2. Gross angling expenditures should increase in approximate proportion to angler days if mean angler expenditures do not exceed $90 per day. Angler days can only be increased if fish abundance in New Brunswick rivers increase, i.e., for every fish available, up to one angler day can potentially be generated. Non-resident expenditures, net benefits to the N.B. economy, represent 70% of the expenditures above.

*Expenditures include fishing expenditures (food, lodging, etc.), major fishing purchases (rods, reels, etc.), and indirect expenditures (boats, trailers, etc.) which could be utilized for other purposes. We have included indirect expenditures here to help represent the minimal total value of angling, as consumer surplus values, angling water value and licence sales revenues have been excluded.

Potential of Landlocked Atlantic Salmon

Landlocked Atlantic salmon originated sometime after the last great Ice Age. The most popular theory suggests landlocked salmon evolved from anadromous Atlantic salmon through a gradual physiological process encompassing hundreds of years (Atkins, 1884; Kendall, 1935 and Power 1958).

Landlocked and anadromous Atlantic salmon have similar life cycles; both have a two to three year stream phase, but landlocked populations have substituted freshwater lakes for the ocean phase of the anadromous strain. Landlocked Atlantic salmon are fall spawners (late October to mid-November) utilizing similar riffle-gravel stream habitat as sea-run fish; eggs are incubated in 6 to 12 inches of gravel, hatching within six months with fry emerging in May or June. Juvenile landlocked and anadromous salmon occupy similar habitat, living two to three years as parr within the stream, then smoltifying in the spring prior to migration to the lake or ocean. Lake habitat requirements include clean, unpolluted waters with a maximum surface temperature of 72 - 75°F, dissolved oxygen levels 6 ppm and pH between 6.0 and 8.5. Landlocked Atlantic salmon are usually found in the thermocline, but rarely below 60 feet. Juvenile fish (up to 12 inches) feed primarily on aquatic insects, where after they require forage species, primarily and locked smelt (Osmerus mordax) and to a lesser extent alewife (Alosa pseudoharengus), to obtain optimum growth (Harvey, 1975).

Landlocked Atlantic salmon exhibit a wide variation in growth throughout their range; stream dwelling fish grow much slower than those in lakes. Growth is affected by abundance of forage, stocking rates and intra-specific competition (Harvey and Warner, 1970). New Brunswick's landlocked salmon populations usually enter the fishery at age three and dominate as four and five year old fish. The average weight of angled fish is approximately three pounds, but salmon weighing up to 15 pounds are taken. Landlocked salmon are usually available to the fishery until age six or seven.

Current Management Practices

Landlocked Atlantic salmon currently provide sport fisheries in several states and provinces. The state of Maine is North America's most experienced producer and manager of landlocked salmon. Harvey and Warner (1970) report landlocked salmon are associated with deep cold water lakes, high in dissolved oxygen and low productivity (total alkalinity 34 mg/I). Recently however, in Maine, New Brunswick and other areas, the habitat of landlocked Atlantic salmon is expanding to more mesotrophic (semi-shallow) type lakes, many of which support warmwater species, such as smallmouth bass, white perch, chain pickerel, etc. (Warner and Harvey, 1976).

Landlocked Atlantic salmon also provide successful stream fisheries in Maine, New York and Quebec, but stream fishing is secondary to lake fishing. Maine, New York, New Hampshire, Vermont, New Brunswick and Quebec are currently managing and developing sport fisheries for landlocked Atlantic salmon.

Present management techniques have been developed from Maine's 26 years of experience and applied research. For instance, stocking rates and growth have been shown to be inversely related (Harvey and Warner, 1970). High stocking

rates result in poor growth, reduced forage and a disappointing fishery. Most fishery managers stock one spring yearling (6-8 inches) per acre on an alternate year basis. Yearlings planted over deep water cover provide optimum returns to the fishery. Landlocked salmon survival studies by Maine biologists indicate survival similar to anadromous salmon. Hatching and swim-up survival is high; with the highest morality occurring during ages of one and two; subsequent survival averages 35% (Harvey, 1974).

Angling Potential

Atlantic salmon, whether landlocked or anadromous, have the ultimate potential for sport fisheries due to its reputation as the "King of Sport Fish". Landlocked salmon are well suited for large bodies of water, co-existing with lake trout and/or brook trout, thus providing a "two-tiered" coldwater fishery. Anglers are satisfied with relatively low catch per unit effort (0.05 fish/angler hour) for landlocks due to the fish's excellent sporting and eating qualities (Warner and Fenderson, 1963). Typically, large salmon waters support between two to four angler hours per acre per year (Harvey and Warner, 1970). In Maine, 642,000 lake acres support over a half million angler days, with stream fishing providing an additional 120,000 angler days (Warner and Harvey, 1976). Approximately 150,000 fish, including wild and hatchery stocks, are harvested annually.

Large lakes supporting substantial angling recreation in the northeast United States include, Lake Winnipesaukee, New Hampshire (45,792 acres) providing 71,400 angler trips in 1982 and Moosehead Lake, Maine (74,890 acres) producing 66,000 angler days which harvested 12,000 salmon (Auclair, 1983). Since the introduction of landlocked Atlantic salmon fishing pressure on a small portion of Lake Champlain, on the Vermont, New York border, has increased from 3,000 angler hours in 1982 to 98,000 in 1984 (Anderson, 1984). Similar angling potential exists throughout Canada and the northern United States, where large oligotrophic or mesotrophic lakes exist (Frey, 1963). Quality Atlantic salmon fisheries can be initiated and maintained in such waters with standing crops of 2.44 fish per acre or 0.73 large salmon (14 inches or greater) per acre (Warner and Harvey, 1976).

Canadian Potential

Landlocked Atlantic salmon introduction programs promise enormous potential throughout Canada, especially in Quebec, Ontario (including the Great Lakes), Saskatchewan and Alberta. Our survey of provincial fishery management biologists concluded only British Columbia and Manitoba were opposed to the introduction of landlocked Atlantic salmon; their management priorities favoured native species. New York state converted four lakes from togue to landlocked Atlantic salmon, with a long range goal for a landlocked salmon fishery in Lake Ontario.

With an increasing demand for high quality recreational fisheries (Brickley, 1980) and a decline of traditional salmon fisheries, landlocked Atlantic salmon can provide anglers with an alternative to anadromous Atlantic salmon. The landlocked salmon's reputation of unsurpassed fighting and eating qualities, along with its potential size, fulfills the most important parameters contributing to angler satisfaction. Duttweiler (1976) found the anglers of Owasco Lake, New York, preferred several medium sized fish to one large or many small fish. Bratten (1970) noted Washington anglers preferred

fewer large fish to many smaller ones. Weitham and Anderson (1978) found species, size, number and diversity were the most important parameters of a successful angling experience. Landlocked Atlantic salmon can provide average and trophy size fish within a diversity of habitat, including streams. Moreover, anglers are satisfied to harvest relatively fewer fish per effort than any other game fish.

Landlocked Atlantic salmon fisheries have enormous potential to provide millions of angler days over a wide variety of habitat in Canada. New York State, for example, anticipates hundreds of thousands of angler days, generating millions of dollars, from a harvest of 71,000 landlocked salmon when their program is completed. Considering the potential in Canada's numerous large lakes, particularly in Quebec, Ontario and Saskatchewan, as well as international lakes (especially the Great Lakes), the potential for landlocked salmon fisheries appears unlimited. Anglers and biologists should plan now to establish the "King of the Sport Fish" in their future.

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I do not think you are interested in any detailed presentation concerning sportfishing in Norway which would divert you from the straight line you are following in this Conference. I will, however, give you some short comments on the situation of the freshwater fish and anadromous species, and in the summary I will give you information about the growing-pen or cage-raising salmon industry which, I understand, also could be of some interest to you.

First of all, I am a fishery biologist, and I am working mainly with management in the Directorate of Wildlife and Freshwater Fish. This Directorate is a part of the Ministry of Environment. This Ministry has responsibility for anadromous fish species and freshwater fish. The administration of salt water species, and the raising of salmon in pens, belongs to the Department of Fisheries. I am, however, a member of an advisory board on sea-ranching of salmon which reports to the Norwegian government, and as such I feel that I have the knowledge to also give you the latest information on this most interesting field.

Outdoor life surveys have shown angling as one of the most popular forms of recreation in Norway. We have about 1.0 million anglers over 15 years old out of a total population of 4 million Norwegians. The number of anglers is somewhat greater than 1.0 million because the anglers who catch marine fish species are not included. We also must add the approximately 40,000 foreign anglers, most of whom are from the other Nordic nations. The number of anglers has not increased in the years between 1970 and 1980, which were the years when these surveys were done. The catch of these anglers is estimated to be about 10,000 tonnes of freshwater fish and anadromous fish caught in fresh waters. In 1980, the sport fishermen fished about 12 million recreational days, of which 9 million days were in freshwater and 3 million days were in recreational fishing (mainly trolling with 1 line and spoon) in the sea.

In Norway, all who want to catch anadromous salmonids in inland or salt/brackish water have to buy a national licence. The licence costs 30 NOK (5 Cdn. dollars), and the price is the same to foreigners as to Norwegians. Each year about 250,000 people, or about 25% of the estimated number of anglers, pay for this licence. I think that here there must be a great potential for higher income if you have the right marketing person. This national licence is exclusively issued by the Post Office, and it is personal. In addition, to fish in any given locality you have to buy a permit (fishing card) from the holder of the fishing right.

The income from national licences represents 7.5 million NOK yearly, or $1.2 million (Canadian). The anglers have made some criticisms to us about the use of this money, much of which is going to research projects. The anglers want a greater portion of the money to be used in direct practical work in fishery management. The general long-range research and managing work concerning freshwater species is paid for by the government.

The inland fishery is almost exclusively a sport fishing activity. The salmonids, brown trout and char, dominate the catch. Together, they represent 70% of the total catch. This must be seen in the light of the distribution of the fish species in the country. Generally, we have very few fish species (40), but in greater areas trout and char are the only species.

I think that the greatest problem in the inland fishery today is too much fish and too little fishing activity. Both trout and char have too many overcrowded populations. The root of this problem is, to a certain extent, caused by insufficient organization by the owners of the fishing rights. In Norway, the owner of the land also has the fishing right and, in many areas, groups of owners do not agree with one another about the selling of fishing cards and do nothing to increase the sport fishing activity. However, the opposite is true for salmon fishing.

I feel that we in the inland fishery have a strong need to evaluate the economic aspects of the sport fishery. In most provinces, Canadians use licences as the starting point to get an overview of the value of the sport fishery. As I mentioned earlier, there is a discrepancy between the number of people who actually fish and the number of licences issued. In this situation, I think that the Ontario model possibly may be of greatest interest to us.

We have three anadromous salmonid fish species in Norway which are the most important - sea char, sea trout and salmon. Some years ago, when the Russians cultivated the rivers on the Kola Peninsula with different salmonid species from the Pacific Ocean, we also had large numbers of Oncorhyncus gorbuscha (for which the common name, I believe, is humpback).

Salmon are found in 400-500 different rivers, not including tributaries. The total length of these rivers is more than 5,000 km., so many of these rivers are relatively short. Most of the total annual catch (80%-85%, or 1,500-2,000 tonnes) is caught within the commercial fishery. Fifteen percent is caught by the sports fishermen in rivers. Drift nets, pound nets (traps) and bend nets are only used in the sea. It is not allowed to use nets for fishing in salmon rivers, with the exception of a few rivers. Before 1980 the use of different types of more commercial gears with nets was permitted in rivers. However, due to the fast-flowing characteristic of the rivers, few salmon could be caught using such gears. In addition, it was very irritating for the sports fisherman to see nets and traps being used in the locations where they were sport fishing.

Each year the Central Brurca of Norway presents data on all salmon caught. In accordance with the law, each person catching salmon must submit information on the quantity of salmon caught. Each fisherman must pay a special tax of 2.5%-3% of the value of the caught fish. However, we have reason to believe that our registered catch statistics for salmon, which are coupled to a tax system, are not very reliable. Nevertheless, they do reveal the trends in the development of the salmon fishery.

Approximately 630 persons were allowed, by special licence, to use drift nets during the period 1983-85. Depending on boat size, a given number of nets were permitted. The boat sizes fall into three groups - those using 20 nets, 30 nets and 50 nets. Each net is 40 metres. In 1982, 22,500 nets were in use, compared with 1,850 pound nets, 5,200 bend nets and 27 stationary nets. The drift net fishery started up about 15-20 years ago.

	1982	1968
Drift nets	55%	16%
Pound nets	19%	65%
Bend nets	24%	19%

Norwegian salmon stocks are also harvested off the Faroe Islands. About 35% of the catch in the long-line fishery off these islands are salmon from Norwegian rivers.

The fishing season in Norwegian territorial waters is from June 1 to August 5 and, with some exceptions, from June 1 to September 1 in the rivers.

The drift net fishery is located outside a line drawn between the outermost parts of the islands along the Norwegian coast. The fishermen combine the salmon fishery with other fisheries in the sea, fishing for crabs and cod. Fishing with pound nets and bend nets are only allowed by the land-owners along the coast. No special licence is required for this type of fishing.

The Norwegian salmon fishery is a true mixed stock fishery, with all the problems that are created by such a situation. In addition, the fishing pressure on the different stocks is very high for some rivers - about 0.8 - 0.9, which is far too much. However, we intend to do nothing with this situation in the near future.

This year we must decide what regulations we will propose to the politicians for 1986 and later years. I think our politicians have a very good understanding of the biological problems in the salmon fishery, but I feel that this is not enough. Other arguments must be laid on the table and herein lies our interest in this Conference. The Conference throws light on arguments, value calculations and social connections which are of the utmost interest to us, seen in a more long-range management of our fish populations.

Sport fishing for salmon in Norway is of great value. Someone has mentioned 400 - 500 million kr. (clothes, equipment and accommodation costs included). But our sport fishery is threatened in different ways. Most of our rivers are affected by one or more of the following factors, such as pollution, hydro-electric power production, acid rain and so on.

Detailed studies have been made on acid rain since 1974. The area influenced by acid rain today is about 33,000 km^2, where the fish populations are extinct on 13,000 km^2. The situation is getting steadily worse. A lot of salmon rivers in the southern part of Norway have lost their salmon populations.

In recent years, we have found a new problem. This is a parasite belonging to the group of trematoda. This parasite attacks the salmon young in the rivers and the young die from secondary infection by fungus. The infection and the kill of salmon young is very near 100% of the total number of young in the river.

One of the good things from a sport fisherman's point of view is that there is very little conflict between sport fishing and other recreational uses of waters.

Now to the question of pen rearing of salmon. This is growing very fast, totalling about 25,000 tonnes in 1983. Ninety percent of the production is exported for good prices. The smolt production is about 25 million Atlantic smolt. Pen rearing is strongly licenced, by way of a given production volume being given to the various producers.

I have heard from many of you that you see the pen raising industry as a possibility to lighten the pressure on the natural stocks. Maybe it will function in that way over a long period of time. For the present, however, we have in Norway asked some questions about the implication of a fast growing pen raising of salmon on the natural stocks. These questions concern problems with parasites and diseases, competition for production areas in freshwater for producing salmon young/smolts, possible implications concerning genetic straying within natural stocks when farmed fish escape from the pens, and so on. You are in a possible situation of discussing and clarifying these questions now.

Lastly, I personally, and on behalf of my Minister, thank all of you, the arrangement committee and in particular Archie Tuomi, for letting me join this Conference. It has been very interesting and stimulating for me. We have much to learn, particularly in the planning, procedures, and about economic evaluations in the sport fishery. I have made some good friends here, and I really hope that we soon can meet again, either here in your beautiful country or in Norway.

Sport Fisheries Development Opportunities in Saskatchewan

Ron Johnson
Chief, Inventory and Consulting Services, Fisheries Branch
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The proposed goals and strategies for fisheries management in the 1980's is a document we produced back in 1981 and was the basis for our fisheries policy. For it, we made an assessment of the numbers and areas of lakes in Saskatchewan and we came up with figures that there are more than 94,000 lakes with a total surface area in excess of 67,000 sq. kilometers, plus another 1,000 sq. kilometers of streams. Now this sounds very impressive but the number of lakes that are large enough to support tourist outfitters is very limited and most of these 94,000 lakes are in the small to very small category. We looked at all of the lakes that we had and their productivity and, almost without exception, every one of our water bodies has some form of use. They either have a commercial fishery, an outfitter or a number of outfitters, or there is a community with substantial domestic use. Our assessment indicated that there is little or no room - if there is any room, there is very little for resource use expansion. So any opportunities for sport fish development then has to be based on two proposals.

The first proposal would be to take the game fish harvest from the commercial fishery, which at present is about half the total sport fish harvest. That puts it at about 5 million pounds because our sport fish harvest is ten million pounds. So, if we took that 5 million pounds from the commercial fishery, it would expand the sport fishery by about 50% over its present capacity.

The second alternative is to try to increase the fish supply through enhancement programs. Now for the first alternative, which is to take the game fish away from the commercial fishery, we are faced with resistance from our northern communities. They point out that there is 90 to 95% of unemployment of natives in the north and the commercial fishery is very necessary for the families and communities involved. The fish that is caught is either sold and produces some cash for the community, or that which is not sold provides food for the rest of the community. The northerners further contend that the development of outfitting leaves them in the users of wood and drawers of water category and destroys their freedom of life that they cherish. I think this is largely true because the number of native entrepreneurs in Saskatchewan is limited to only 3 native owned camps at the present time. Now, if the commercial harvest of game fish is to be channeled into the sport fishery and into tourism and outfitting, we need to demonstrate to the northern communities that they will become the major benefactors. So I was interested in a comment made here, I think it was from the Northwest Territories, that some of those communities up there are actually curtailing domestic catch so that they can

continue to support the sport fisheries that were bringing in some money up there. If we get that kind of choice from our communities then we could go ahead and divert some of the game fish in the commercial catch over to the sport fishery because our policy states that northerners are to be the beneficiaries of outfitting in the north whenever possible.

The second alternative, which is to produce fish through enhancement, will require substantial investments to make a major impact on the fishery and will require a major technology transfer to apply this kind of program on a large scale. We are probably looking at a ten year time frame to accomplish a significant resource increase if we go that route. Now, in spite of these facts that seem to be apparent to fisheries managers in Saskatchewan, the Department of Tourism and Small Businesses is developing a tourism policy based on sportfishing being the major attraction for tourism in our province. I understand that they plan on spending something like ten times last year's budget on advertising of sport fishing in Saskatchewan. We are also getting pressure from entreprenurial groups, such as the Fly-In Sport Fisheries Industry Association, represented here earlier by Mr. Jack Cole, to expand the outfitter's share of the resource.

In this regard, we are carrying out two studies in Saskatchewan, as cooperative endeavours between the Freshwater Institute and ourselves. One is an economic study of outfitters in Saskatchewan. The preliminary results are now available and what it seems to indicate is that the outfitters are living off the capitalization of their industry. It is sort of like farmers; you live poor and you die rich when you sell the land that you have accumulated through your farming. The place that the outfitters make money from is when they sell their camps. Now, I see Mr. Liddle looking at me there. This is an economist's view of what happens, whether it is so from the outfitter's point of view, I wouldn't want to get into an argument about that.

The second study that we are doing in Saskatchewan is an economic assessment to try to evaluate what a fish is worth to an angler. This is essentially aimed at trying to get a handle on whether enhancement programs are really economically viable or not. So we do appreciate the cooperation we are getting from the Freshwater Institute in these two studies. As a matter of fact, they are carrying out most of the work and, while we are doing most of the legwork, they are carrying out most of the analyses.

In conclusion, there seems to be little room for sport fishery development opportunities in Saskatchewan without some major shifts in policy or in enhancement activities. It is clearly not just a case of moving in to take over an unused resource and there is obviously a need for policy integration as a total government function in the province. There is no use in tourism and small businesses going one way, resource managers going another way. We also need to take a close look at assessment of the economics of the various alternatives.

Discussion

Howard Paish: I would like to raise three points, the first two to do with British Columbia. The third one is on the Yukon and remote areas in Canada.

Within 15 miles of this hotel, there are 17 sites that are providing between 50 and 60,000 angler days per year fishing for non-salmonid species from a whole range of existing piers, wharfs, seawalls, etc. These anglers are a totally new group for fisheries management. They are not represented by the organizations here. One only has to think of the political implications of that. Over half of these sites are accessible by public transit, and 75% of the anglers are old age pensioners and kids. South of here in Washington State, they have a similar facility that provides 60,000 angler days per year. The average catch is 1 fish per angler day and it seems to attract people back regularly. It is exploiting species like hake, squid; all kinds of things that are quite unheard of as sport fish on the west coast. In addition to the 60,000 anglers, it provides an additional 70,000 angler watchers.

The second point is the whole question of enhancement. I am backing the sort of Lee Straight/Bob Wright argument here on terminal fisheries, I suppose. Our steelheads along the Pacific coast are weak stocks by any standards. We have the experience from the Babine system of 15 years ago where we put in a massive sockeye enhancement exercise and we have virtually eliminated steelheads from some of the most famous steelhead rivers in the world, the Kispiox and so on. We have reduced stocks seriously in other rivers. Probably along with some habitat loss, that fishery led to the demise of the river, the Kalum River, that produced the world record chinook and so on. I could go on indefinitely, the way in which the effort to catch those sockeye has totally screwed up our sport fishing opportunities. Right now in the same area as the famous Dean River, with a stock strength of 5,000 steelhead a year, give or take a few, we are into a heavy enhancement project at Seton Creek that will turn out 8 million chums. In order to harvest those 8 million chums, for which there is a very questionable market on the world salmon market, we are placing the Dean River fishery in jeopardy. The answer to those problems is so overwhemingly simple in it's logic that we just don't bother with it; that is, a terminal fishery. It doesn't have to be a weir type system, a terminal fishery can be a bunch of seiners moving closer to the river mouth. You become far more stock selective and get them out of the mixed up fishery. And I suggest, and I looked at this pretty carefully and I have got a magazine article here, such a fishery would be every bit as labour intensive as the present fishery. The point is it will be labour intensive, the money would going into wages and local service, etc. and not into the banks and mortgage payments on over-investment in the fleet. It could be handled all very much by local communities, particularly native communities, etc., etc., etc.

Right now in the Yukon, we are actually touching with our anglers about 1% of the available Arctic grayling habitat. I suspect we are touching about 3 or 4% of the grayling habitat that is reasonably accessible by road. The grayling is the number one sport species in terms of preference by anglers, resident and non resident, in the Yukon in numbers of fish and is a much easier fish to catch than lake trout. And right now in the Yukon we have 60 lakes accessible from roads by two-wheel drive vehicles, all within about one hour trail hike from the road. By building recreational trails into such lakes we could probably double angling opportunities without a lot of fancy biology, by simply opening up underutilized stocks being produced by our Yukon habitat.

Wilf Carter: I wouldn't want people to go away from here thinking that the rivers in Norway are teeming with more salmon than salmon fishermen. The comment was that in their lakes they have more fish than fishermen. I think

their salmon rivers are in about the same state as ours. I also want to thank Ken Cox for listing new ways to get funding for development of fisheries. Perhaps one of the things Dr. Rabinovitch can take back to Ottawa with him is some way to perfect a mechanism whereby some of these innovative funding opportunities can be implemented and the money put back into development of the fisheries. I would like to see some sort of mechanism developed whereby those of us who put the money in as users of the resource can feel comfortable that we are going to get it back and reused again.

Bill Bryson: I have a couple of questions. One, I would like information on the bypass situation on the Saint John River. It is all well and good to have fish raised up in elevators and taken by truck up the river, but what happens to the young fish on the return trip down? I know in my experience in Nova Scotia, the experience on the East River, Sheet Harbour, it sure wasn't a beneficial thing to do. Second, I would like an explanation as to what is happening to the multi-winter sea fish that are not coming back. Where are they going, are they being taken by the commercial fishery or the sport fishery, and if so, what are the plans for curtailing that type of activity?

Bill Hooper: I can't tell you exactly what the mortality rate of smolts is at Mactaquac Dam, but I think it is pretty good. Glen Jefferson or one of the other federal people might be able to tell you about that, but based on the return of wild fish to the Saint John, it must be pretty good. As to what is happening to multi-winter sea fish, they've just been clobbered! It started with the Greenland fishery, and at that same time with nylon gillnets in our own fishery. The Newfoundland fishery escalated. Our commercial fishermen got a little better at it, there was a lot of poaching going on in the tidewater, the Faeroes came along, and that is just the straw that broke the camel's back. So, it is just a matter of a long chain of events.

Bill Bryson: But very little of it attributed to the sport fishery?

Bill Hooper: No, sport fishermen take approximately, at the most, a quarter of the stocks available in the river. Generally, as a rule of thumb, you can say you've got 25,000 fish coming into a river, you've got 25,000 angler days. It's amazing how that works out but Les Dominy first pointed that out way back in 1967.

Bill Bryson: What are the plans, and/or monies, on the federal part presently being given to sea ranching in Atlantic Canada?

Glen Jefferson: I don't have the actual figures Bill, but I can get them for you. With regard to potential mortality of downstream migration at Mactaquac, the natural production above Mactaquac is at a residual level of 70% of the total river system so that must be an indication that there isn't very much mortality as a result of the down stream migration.

John Clarke: Ken Cox was identifying the various actors on the sport fishery stage and he mentioned the manufacturing industry and the lodge industry. I believe it is very important that the primary people in the industry, like the lodges and the outfitters, be identified separately because their existence is much more crucially related directly to the fishery, as opposed to someone selling boats and motors and that sort of thing. There is a need for definite distinction there between those two categories. And Ron Johnson, if I may, I

think if you keep an eye on northern Manitoba vis-à-vis native development of lodges because of the northern flood agreement, I think you may see some very interesting things take place in the not too distant future, and I think that maybe the key word is joint venture. Right across the country, we've been missing out on putting expertise together with the people who have the resource.

Terry O'Reilly: If I may, Mr. Clarke, my inclination is to take issue with you because governments think in terms of how money is spent and think in economic terms. It seems to me that in terms of total benefit, we should not at this point in time be looking for segregation, but rather for commonality in pressing governments to bring their sport fishing policy up to the priority that it ought to be.

John Clarke: My point is that the commercial recreational fishery survives on specific quality of the fishery whereas the general manufacturing industry isn't dependent on a specific standard. I think there is a distinction there.

Terry O'Reilly: I would agree there is a distinction. I just can't help wondering if there are times for looking for differences and times for aggregation. From what I've seen in government, there is from a federal government perspective, a great resistance to accepting economic impacts. Certainly some are more direct than others, but we don't get our case across because people in other government departments which control expenditures and influence policy are unimpressed by totals which are not absolutely provable.

Ken Loftus: I've always been fascinated with the term development. I believe that with respect to fisheries in this country in general, the era during which we could seriously address further development, and all those good things, passed us at least a decade ago. I consider that we are now in a maintenance mode at best. Hang on to what we've got as a base for economic activity, or redevelop, rehabilitate, or redevelop the resource base that we used to have. This is not a popular kind of stance to be in. It is difficult to get money in support of such programs. It also implies, as management agencies, we haven't been doing all that well in the past and we've got to do some things better. I want to state one specific example of rehabilitation that works and that creates economic benefits. The Bay of Quinte in Ontario used to have an excellent walleye population with a lot of angling, a lot of commercial fishing, and a lot of tourist activity. That population collapsed in the late '60's by virtue of not over exploitation, but apparently because of deteriorating water quality and it was excessive nutrients that was identified. Strangely enough, during the '70's that water quality situation was reversed and in the 80's the walleye population had re-established itself. Thank goodness fisheries people like ourselves didn't get in there and mess around the opportunity for them to re- establish themselves once the basic situation had been corrected. The redevelopment of that walleye population has resulted in a re-establishment of a lot of economic benefits for fisheries users and for water users. They don't have to build a pipeline now for their water supply back up to Lake Huron or some such place. The economic benefits that have been generated in that rehabilitation situation have flowed to fisheries users and to a much broader segment of the public than have the benefits derived from plantings of Pacific salmon in the Toronto region. The latter benefited selected fish users and generated a lot of economic benefits and the numbers are available. It created a whole lot of attention, especially

in the media. The walleye recovery in the Bay of Quinte didn't generate any media coverage but it benefited more people and the economic benefits were larger. I admire the imagination that was used by the panelists discovering ways in which further economic benefits could be developed but I hope we don't focus on these, as we so often have in the past, at the expense of doing a better job of what we are supposed to be doing. That is redeveloping or rehabilitating the basic resource.

PANEL 2

RESOURCE USE CONFLICTS

Chairman: Ernie Stenton
Section Head, Sportfish Management, Alberta
Department of Energy and Renewable Resources

The purpose of this panel in resource use conflicts requires an identification of problems that we may be having in the sport fishery looking to the 1990's. The key issue here is we had better identify problems we have now so that we can start working towards some sort of solution to those problems before the 1990's get here. If I can take a leaf out of Art Holder's book this morning, we should be 10 years ahead of things, not 10 years afterwards. I leave it to the panel members to underline what they see as some of these future problems.

Ken Brynaert
Executive Director, Canadian Wildlife Federation

It is apparent from papers and words at this conference that there are real concerns over fisheries management and a high priority has to be given to conservation and allocation. Under conservation, we have to look at it in two parts; both habitat and resource. I think in both cases we need rehabilitation, maintenance and enhancement. Ken Loftus made a statement last night that I thought would have been appropriate here today when he said an ounce of rehabilitation is worth a pound of enhancement. I subscribe to that.

In relation to habitat, there is something that I have been very much involved in this past year that will be announced by the Minister of the Environment next Monday, the 20th of February. Mr. Caccia will announce the formation of Habitat Canada. There are some implications to the formation of Habitat Canada that could have a very decided influence on habitat enhancement and improvement for fisheries habitat. The focus of Habitat Canada at the outset will be on wetlands, and the federal government is going to provide us with $1.8 million as a start-up fund in Habitat Canada. How Habitat Canada came into being is an important point because at the end of my talk I'm going to make some recommendations as to where this federal-provincial fisheries conference might be able to take us on some of these initiatives. At the Federal/Provincial Wildlife Conference, the CWF made the recommendation that a habitat trust be established and that the federal government give support to that body. The end result is that we will now have a private trust organization with a start-up fund of $1.8 million of federal money. We have a Cabinet decision, and I think this is a really important thing, a Cabinet decision to produce a duck stamp. The duck stamp will be attached to the migratory bird permit and the total revenue derived therefrom will be turned over to the private corporation, or trust, Habitat Canada. Now I don't want to take up too much time on suggestions that we have heard of how we might possibly get more money. It can be done and there are ways of doing it. I'd be quite happy to discuss the details of Habitat Canada with anyone. One of the important things was we made damn sure that the control of the trust is on the public side, not the political side. I wouldn't have gone with it if it was any other way. I don't think there is really any need to detail what the issues are, I think that has been quite obvious, certainly to me and I hope everyone else at this table.

I would like to touch on the subject of allocation. I think there is a concern among recreational fisheries users that we are not making an adequate impact on the decision making of managers on fisheries resources. We do a lot of gnashing of teeth, stomping and tearing of hair and I don't think it really makes an impact and I'd suggest it has to change. It can't go on that way.

I'd like to suggest that we on the user side must be better informed. I'm not suggesting, by making that statement, that we are not informed. I think we are fairly well, but we have to be better informed. We've got to steer away from the confrontation approach to dealing with this matter. I think with people like Dr. Carter and some of the other people that I have listened to around this table, we've got the people who can do it, and I think that is something that we are going to have to pay attention to. I think we have to achieve recognition that the recreational fishermen are important users of the resource. It is a simple statement. We are, I'd say, the most important users of that resource. We are not treated as such. I think we have to participate with other users in developing effective fisheries conservation programs and present them to managers. In other words I don't think we can just sit back and expect it to happen. I think we have to be part of that process that says these are what we feel are the important fisheries programs. That goes back I suppose to my first point of being well informed. We believe that the process of allocation involves the universal use of licences or leases with prescribed limits, user fees and responsibilities. I think we need all those things. We need a strong scientific and socio-economic information base. We need active participation of the users in the bargaining necessary to provide advice to management.

I must tell you I've never been impressed with ministry advisory councils or boards. My experience over the years is that they have been a mechanism put in place by bureaucrats to protect ministers. It has been my experience, and I suppose I've served on twenty, twenty-five boards. I don't serve on any anymore. I've given up on it. If we want to talk to the Minister, we go to the Minister. I also think we have to pay attention to the costs and benefits and the importance of more self-regulation by users. And again we have heard about that around the table in the last couple of days. Users are prepared, certainly the organized users are prepared to self regulate. I think managers have to take advantage and encourage this kind of initiative.

I personally, and I hope I speak for other members of our group, I'm somewhat disappointed with the relatively few senior fisheries managers that are present at this meeting and those that are, seem to be popping in and out, popping out more than in. I think certainly it would serve in the best interest of what it is we are trying to accomplish if they would stick around and listen. I think that has been one of our problems for years. People aren't listening to us. We may have to develop a two-by-four approach. I think that there is a need, it has to happen. There has to be a greater line of communication between federal and provincial fisheries people. I use the example in my opening remarks about the federal/provincial wildlife conference or the federal/provincial meetings that are held in relation to wildlife. They work well. They have their meetings every year. They had their regional meeting. We, along with wildlife fund and nature federations, and so on, participate in those meetings. Now I'm not suggesting there aren't conflicts and there aren't times when we are adversaries. But we get along well together. The interesting thing is that one of the benefits of this regular

meetings with federal/provincial people, besides the opportunity to express your concerns, is that quite often we find wildlife managers coming to us and saying, "how about giving us a hand. We are having difficulty with the politicians in this particular issue. We need some support". And by God we deliver. That's one thing we are good at. It's our business. Lobbying. I think I have expressed what I consider to be some of the areas of conflict. I think that what has gone on here the last couple of days, certainly from my standpoint, is of great benefit to me. We are going to be following up on it. I'd suggest that you be prepared for some new approaches from the public interest sector from this day hence. One other thing and I'd remiss if I left without making this little pitch. I don't know how many people around this table are members of the Canadian Wildlife Federation. If you're not, you should be, because we are delivering our message to the public at large.

Don Toews
Chief, Sport Fisheries Branch,
Manitoba Department of Natural Resources

I'm not an expert on resource use conflicts, but I would like to put a perspective on this, the topic of resource use conflict, and these I guess are largely my own impressions based on my past experience. Firstly, I think that we have to recognize that we need some new solutions or we've got to apply the solutions that we have more effectively because, by and large, I don't think we are really coming to grips with the problem of resource use conflicts, at least not for the longer and broader term. To provide a bit of an additional perspective to it, I think the solution to resource use conflict is very often a step-wise solution. The problem is incremental so I think the solutions have to be incremental. We are not going to come up with any great big new solution, all in one bang. I think it's going to be a gradual process, just as the development of the problem. But I think we have not only got to move on a step-by-step basis, but we have to know where we are heading towards. And I think, based on what we have heard here in the last couple of days, that the resource supply, at very best, will be fixed. That is a very optimistic scenario. I think, realistically, that probably isn't the case. We are probably going to loose additional resource supply due to habitat losses. But let's assume that resource supply will be fixed and that enhancement efforts and all this new money from habitat programs going into enhancement will at very best be able to maintain the resource supply and the supply of sport fishing opportunities. I think we recognize that demand is increasing. Not only are there more anglers who want to go and sportfish, but the angler is becoming much more efficient. He or she is a much better angler. They are able to catch fish much more readily than what they did in the past. Having said that, I would like to look at the subject of resource use conflicts.

In terms of the nature of the conflict, I think from a management perspective we have two types of conflicts. Traditionally, there is commercial fisheries conflict, but I think it goes much broader than that. The conflict can really be resource based. That is, there is just not enough fish to go around for the commercial users and the sport anglers to meet their level of demand. Or the conflict can very often be a perceived conflict. That is, anglers or commercial fishermen perceive the other group as taking an unduly large amount of the supply, and that isn't always the case. But I think both conflicts, whether based on a real resource limitations or a perceived

conflict, it doesn't really matter. They are both conflicts that have to be addressed from a management point of view. In terms of multiple use, you can have commercial fisheries, you can have sport fishermen, you can have lodge operations. There is competition for the same resource but I think basically they can be accommodated. There are mechanisms for accommodating and meeting expectations in a relatively non-conflicting situation. I guess the whole idea behind multiple use is that the accumulative benefits to commercial fishermen, to anglers, to lodge operators, to the public at large, they all outweigh the benefits generated by any one individual user group. That isn't always the case but, at least here in Manitoba we are convinced that in some instances that is the case.

In the last several years, we've put a fair bit of effort on trying to put a finger on the ingredients of a successful, or a nonconflicting, multiple use situation, and we do have some that have worked very well for 15, 20, 25 years. We have some that involved lodge operations, that involved the commercial net fishery, that involved anglers, and all of them had been fairly satisfied over the years. We find that, in fact, the different users concentrate on different species of fish, a different segment of the resource stock. We find that it is helpful to separate them as much as we can in terms of seasons and times. That, at least, helps alleviate the perceived conflict. In short, the anglers don't see the nets in the lake. We find that multiple situations can probably work where the same operator has basic control of more than one commercial use. You could probably have commercial fishing on a lodge lake if the lodge operator was basically controlling the commercial fishery, or the commercial fishermen controlled the lodge operator.

We know that multiple use does not work in some situations. We know that a high quality wilderness trophy lodge fishery in northern Manitoba cannot sustain a commercial fishery. There is a very large perceived conflict, and anglers won't pay $1,500 a week if they feel that these lakes are being commercially fished. It may not be a resource conflict but they are gearing on trophy fish and while the lodge operators are practicing very conservative resource management policies, you just can not have a commercial fishery in that type of situation. So there are some situations in which multiple use just doesn't work. I think we need a lot more effort into refining the criteria and the necessary ingredients for successful multiple use situations.

In terms of resolving resource conflicts, I think we have found that the elimination of one or more of the users is a solution that just doesn't work. We have tried it, we've tried it in Manitoba, even fairly recently, and on a fairly small lake. We got the users off. We got the commercial fishermen off but they were back on in six months. It was a solution that just didn't work and I think it has been tried elsewhere. Resolving resource use conflicts is an incremental process. It is not a one shot deal. The problem has developed over a period of time so it has to be resolved over a period of time. I haven't got the answers, but I have, I think, some of the necessary ingredients for resolving resource use conflict situations.

Firstly, I think all users must recognize, anglers, commercial fishermen, lodge operators, whoever uses the resource must recognize that they are part of the problem and they are part of the solution. It is not one user group that is causing the conflict. All the user groups are involved to a greater or lesser extent and they also have to be part of the solution. Next, we have to

recognize that it will require a negotiating process and that some trade-offs, or compromise, will probably be involved on the part of all user groups. We've tried this approach in Manitoba where we have worked with commercial fishermen, we've worked with anglers, the cottage owners association, the lodge industry, and we've developed a resource management agreement. Now, it is an informal agreement, and it is limited to a period of three years, but it outlines the steps that will be taken and the trade-offs that the various user groups are going to make. And, I think it will work. All of them realized that the resource base in this particular system is limited and that the first priority is not only to restore, but to improve the resource base. And without this resource base, none of them have anything, so all of them made some compromises. I also think there are other opportunities, for example, the transfer of opportunities through sale could occur. Certainly, we have encouraged this in Manitoba in the lakes where we have had both commercial operations and lodge development opportunities. We have encouraged lodge operators to simply come and buy out the fishing rights of the particular individual. We don't have a legal mechanism for it, but it has in fact worked as a reallocation process in some cases. The fourth point I would like to make is that when we were talking about resource use conflicts, immediately we think of anglers and commercial fishermen. But I think there is a much more important resource use conflict that we have to recognize. This involves the degradative users of the resource. For example in Manitoba, and I talked a bit about this a couple of days ago, the resource has been very, very severely impacted by various agricultural and development activities. Drainage, channelization, and nutrient loading have affected spawning habitat and have produced very eutrophic situations. The degradative use of the resource has to be recognized as part of the conflict. It's not just people that go out and harvest the fish, it's also the people and the activities that affect the supply of the fish. That is part of the conflict and those have to be explicitly taken into account into resolving the overall picture. And I would like to emphasize what Ken Brynaert said. I think we sometimes say that the resource is dependent on habitat. I would like to turn that around and say habitat is a resource. If we haven't got habitat, we have no resource, and I think we can make it that direct.

Ralph Shaw
Chairman, Sport Fishing Advisory Board,
British Columbia

On behalf of the Sport Fishing Advisory Board I wish again to express appreciation for the opportunity to attend and participate in your conference. It has been a rich educational experience ranking in the class of a trophy fishing experience.

My representation on my board and at this conference is as a sports fisherman in the sports fishery. Let me give some of the Resource Use Conflicts I see from inside the resource.

1. Catch and Release - Maybe we should have a limit on how many fish you can catch and release in one day, especially by "hot shots" on steelhead streams.

2. Outboard Motors - Their use and non-use on small lakes.

3. Fly Fishing Only - I am a fly fisherman so of course this aspect pleases me - but what about other gear types.

4. Sports Fishing Activities in major shipping lanes with the attendant problems of small boats playing fish in fast water in narrow passages that are regular ferry runs.

5. The Capilano River, about two miles from where we sit, is a major success story in enhancement from its hatchery. It also produces major resource use conflicts if you are trying to get a ship into the Vancouver Harbor during a run of coho or chinook salmon.

6. Single Use Leases of beaches and waterfront for oyster harvesting and clam digging often creates conflicts with the recreational public in pursuit of shellfish.

7. Conflicts created by types of fishing often lead to confrontations that tend to spoil the experience; for example, a group of anchored moochers who have to entertain a troller that comes through and collects anchors, lines and assorted blessings as it passes by. If you are a commercial fisherman, it is a catastrophe. If you are a sports fisherman, it is like a South American soccer game when the home team loses.

8. Conflicts that arise as sports fisherman expand their activities into wilderness areas or new fishing areas along the coast. The resource use conflicts that can happen when you get a few hundred neophyte sports fishermen along with a few hundred seine boat fishermen in the narrow confines of Johnstone Strait and Wyaten Passage border on the humorous and catastrophic when the shower room talk goes like this - "we didn't know what to do when he started to take us and our boat over the rollers" (on a drum seiner this can be serious).

9. Current problems arise because of people of Asiatic origin who use the recreational fishery largely as a food fishery - some of our rock fish and shell fishing areas are taking one hell of a beating; this will be a serious resource use conflict problem in the 1990's.

10. Conflict arising from the harvest of mixed stock fisheries, as expressed in Howard Paish's speech a few minutes ago.

11. Conflicts arise when an over-zealous DFO closes a major sports fishery at the mouth of the Fraser in a conservation program when it turns out to be a trade-off to the gillnet fleet.

12. A conflict that has disappeared on our Board - secondary commercial versus primary sport fishermen on our board; this has been resolved and I hope we achieve this across the nation. It is worth the effort.

Maybe Allocation Isn't the Key Issue

Alan Barber
Economist, Regional Economic and Marketing Service
Department of Fisheries and Oceans, Winnipeg

Conflicts between use of the fisheries resource for recreational, commercial or domestic fisheries seem to be the focus of most public discussion on resource use conflicts. The more fundamental conflict over whether or not to permit use of our water resources for industrial purposes, which often degrade fisheries habitat, also receives its fair share of attention. While allocation and habitat protection are undoubtedly urgent issues, both at present and for the future, I intend to focus on a different sort of resource use conflict which I believe is of at least equal importance.

Consider the situation where a fish stock is utilized solely by the recreational fishery and there are no threats to the habitat. Conflicts over the use of the resource will still exist amongst individual anglers. Conflicts may arise on issues such as overcrowding at certain sites, overfishing (and consequent declines in the catch rate) or, between different categories of anglers such as residents versus non-residents or "purist" fishermen versus "meat" fishermen. These problems have usually taken a back seat to the issues of allocation and habitat protection yet they are of fundamental importance in that failure to recognize and address these problems will lead to,

> "an unstable spiral of attempting to provide more fish for ever more fishermen while other characteristics that contribute to good fishing steadily decline."[1]

The focus of this conference is on the future and in light of this I intend to focus on the problems of overcrowding and overfishing and how we should be preparing for the inevitable growth in the angling population.

The Demand-Supply Gap

A popular notion of the future of sport fishing is that growth in "demand" will soon, if it has not already, outstrip the "supply" of sport fishing, leading to ever-increasing "supply" shortages (or demand - supply gaps). If we equate numbers of anglers with "demand" and numbers of fish available with "supply" and plot the trends in each of these very time we obtain a pictorial representation which points to an impending crisis (Figure 1).

This analysis has a certain appeal because it is simple to follow and is based on trends which are known to be occurring. Briefly, let us look at some factors which are influencing the trend lines.

The total number of anglers is influenced by three factors: 1) the total population, 2) peoples' incomes and 3) the amount of leisure time people have. Each of these factors has grown rapidly over the last 30 years and there is no reason to believe that they will not continue to increase. As the number of anglers increases the "demand" for sport fish will continue to increase. This is of greater significance when it is noted that these demands are being made on a fixed resource base.

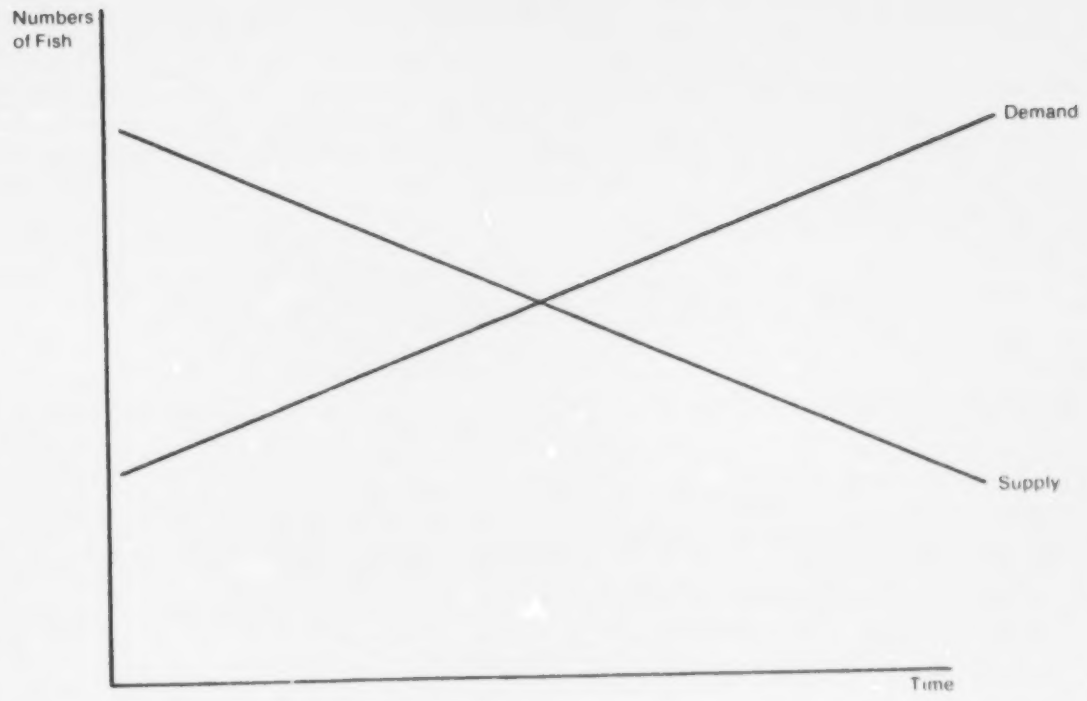

Figure 1. Popular Model

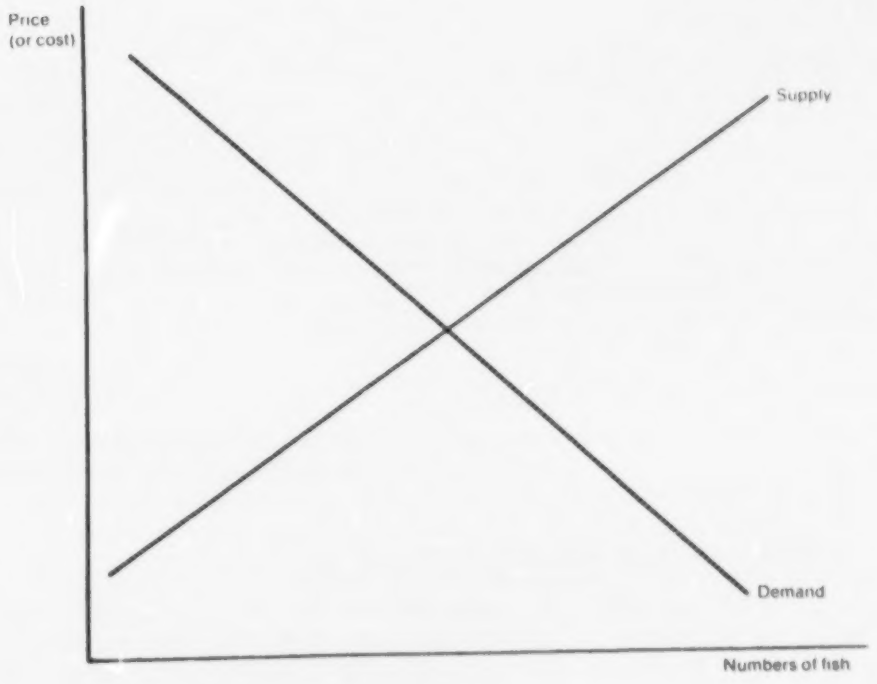

Figure 2. Economist's Model

The trend for "supply" suggests that the resource base is not simply fixed but in fact declining. The increasing encroachment of industry onto fishing grounds and the effects of overfishing have let to the belief that the supply of sportfish is dwindling. These factors are being partially offset as new sites are being made accessible, by the construction of new roads and the opening of new lodges, and existing sites being made more attractive through stocking programs. In fact, the total sportfishing harvest has been increasing fairly steadily which suggests that the effects of overfishing and habitat degradation have been more than offset.

We should recognize, however, that there are limits to the expansion of "supply". Overfishing will result in high levels of current harvest but these will have to be curtailed in the future to protect the fish stocks from extinction. Enhancement is often seen as the saviour, however, given the expense of these activities and the current fiscal position of most sportfishing agencies, the outlook for further enhancement seems somewhat bleak.

The 'popular' model is attempting to warn us that we will soon reach a point where "demand" will exceed "supply". In fact this point has already been reached at many of the more accessible fishing sites. A study of freshwater angling in British Columbia noted that,

> "Pressure on lakes and streams near to population centres has reached the stage where the recreational experience is deteriorating through overcrowding on stream banks and lakes, as well as at campgrounds. Even if a stable fish population can be maintained under those circumstances, other factors which make fishing an enjoyable, relaxing pastime, such as solitude and natural surroundings, are missing... As access is improved to the point where remote fishing sites are within the reach of large numbers of anglers, the fishing there will also decline."[2]

The 'popular model' has some obvious relevance in thinking about preparations for the future. If the above trends are permitted to continue the conflicts between anglers will intensify as the quality of fishing deteriorates. Sportfishing agencies will be forced to abandon their present regulatory system of unrestricted public access[3] in favour of one which controls the number of fishermen as well as the numbers of fish.

While the 'popular' model uses such terms as "demand" and "supply" economists have a certain amount of difficulty dealing with this model. This arises because when economists discuss demand and supply they are referring to the relationship between numbers of fish (or fishermen) and price, which is not addressed in the popular mode. Accordingly, economic models of sportfishing pay more attention, when discussing demand, to the prices that are paid for sportfishing (which generally involve only small 'administrative' fees for a licence) and, when discussing supply, to the costs of public provision of the fish. These relationships are illustrated in Figure 2.

Unfortunately, the economist's model is not convenient for showing the trends through time and thus the impending demand - supply gaps. However they are useful in that they point out some of the important assumptions made in the popular model. For instance, rather than assuming that the current 'administrative' prices will continue into the future, which is an assumption

made in the popular model, economists such as myself are concerned with the potential implications of changes to the management system of unrestricted access. I will return to this point later.

It seems clear that if unrestricted public access is permitted to continue there is likely to develop over time more and more situations where there are "too many fishermen chasing too few fish". Growth in demand is not the only reason we find too many fishermen since at any given point in time unrestricted public access will result in this situation.

If the sportfishing harvest is kept within allowable limits, who is to say that there are 'too many' fishermen. I suppose from a fish's point of view, even one angler is 'too many'. I hope to explain why there are 'too many' fishermen from an economist's point of view.

Instead of trying to develop a complicated economic model I'll try to make the point by appealing to a common sense rule of thumb for determining the appropriate number of fishermen. This 'marginal' rule states that the benefits enjoyed by each additional angler (or angler-day) should outweigh any costs imposed by the addition of the angler (or angler-day). Now consider any given angler's decision to go fishing. The first anglers out fishing are the enthusiastic sportfishermen who obtain great pleasure from the sport but as we move towards the last few anglers that decide to go fishing we will find individuals that are ambivalent towards fishing since the enjoyment they derive is just about equal to the costs they incur. For these last few anglers the costs that they incur do not include the costs they impose on all of the other anglers by reducing the quality of their fishing through greater congestion and lower catch rates, etc. Thus the benefits derived from these last few anglers will be lower than the costs although they will continue to go fishing since they do not have to pay for all of the costs. Economists call this situation an 'externality' because these extra costs are outside of (or external to) the private costs.

There is a simple parallel to this in the commercial fishery. If entry to the fishery is not too restricted then fishermen will continue to enter as long as their revenues exceed their costs. Their costs do not include the costs associated with reduced catches for all the other fishermen thus we end up with the situation of too many fishermen.

If there are too many fishermen now and, it appears that this problem will only get worse if access to the sportfishery remains unrestricted, what options are available to correct for this problem?

If we could continue to manage the fishery as we have done in the past, permitting unrestricted entry and creating more and more stringent restrictions on each angler's effort (lower bag limits, less efficient gear, etc.) we will be left with more and more anglers facing lower and lower qualities of fishing. One of the misleading indicators used by many sportfishing lobbyists is the increased numbers of anglers and accompanying increased expenditures as a good sign in terms of regional employment and incomes. I suggest that if these regional impacts are at the expense of the quality of fishing then perhaps it is not such a good sign.

Attempting to avoid these problems will involve considering regulatory methods which control the number of fishermen and ensure there is no overfishing. The value of recreational resources, like other resources, depend upon their quality. Fisheries management policies aimed at the preservation of quality (and thus value) must incorporate,

> "on the one hand, protecting the resource base from encroachment and damage by other users when this is in the public interest, and, on the other, protecting the quality of the recreational experience on the available sites by maintaining an appropriate balance between numbers of fishermen, the fish stock, and the physical space and facilities."[4]

If we were able to determine some "allowable number of anglers" how could we allocate the available opportunities amongst those wanting them? Some of the regulatory systems which are available to control the numbers of fishermen are described below.

(1) Regulating Access by Pricing

As an economist, establishing a pricing system is naturally one option which I feel should be considered. Setting the price at a high enough level that there are just as many anglers willing to buy these opportunities as there are opportunities available offers one of the most 'efficient' methods of distributing these rights. This system is efficient in the sense that those anglers which value the opportunities the most are those that will be willing to pay the price and receive the rights.

On sites where angling pressure is not yet excessive access charges could be kept low (i.e. at the existing administrative charges) while on heavily fished sites the price would need to vary according to the capacity of the resource and the demand for access.

> "Experimenting with access charges through a pilot scheme would soon reveal general patterns of responsiveness to price. When the appropriate access charge is determined, it should not be changed frequently and should be made known to visiting fishermen in advance. Once implemented, the different access charges at various sites would enable control and redistribution of fishing pressure. In this way fishing quality could be maintained in those lakes and streams which would otherwise deteriorate through crowding and overfishing."[5]

Pricing systems are not simply theoretical constructs which exist only in the minds of economists but are currently applied in some form in both Quebec and New Brunswick. The Quebec Parks and Reserves utilize a pricing system where prices for angling in the late 1970's ranged from $2 to $250 per day for residents and from $15 to $290 per day for non-residents. The wide range in price reflects the range of qualities of fishing available and the same could be said for the range in values of fishing leases on the Miramichi and Restigouche Rivers in New Brunswick.

The adoption of pricing systems in other areas is prevented because of concerns over the implications of a pricing system for equity. Managers are concerned about those anglers who may love the experience but would not be able to pay the resulting access fees. This problem stems from inequality in the distribution of income and for some reason sportfishing is seen as a special item which we should ensure is equally available to all, while we continue to allow essential goods such as food, shelter and clothing to be allocated through a price system.

> "Those who advocate nominal pricing for scarce resources on distributional grounds should understand the implications of the open-access mechanism (overfishing and declining quality) and realize that inequality in income distribution cannot be dealt with by offering the services of recreational resources at prices that are below the allocatively correct ones. The 'opportunity' to participate in over-crowded recreational experiences is a poor substitute for income redistribution."[6]

(2) Regulating Access by Non-Price Mechanisms

There are a variety of mechanisms available for rationing access to the sport fishery which would not entail higher access fees. Systems such as lotteries or "first come, first served" have been used to allocate scarce recreational resources in some cases (hunting licences being a good example). From a strictly economic point of view, while these systems would reserve quality, they would not be efficient since there is no method of guaranteeing that those who value the opportunities the most will obtain the licences. Thus, some of the potential value of the resource would be sacrificed in the name of equity. Other problems such as the emergence of black markets may develop under such a system, however by restricting the total number of anglers to some appropriate level, the results are still likely to be superior to that of continuing the present policy of unrestricted public access.

These systems are used fairly extensively for a number of different recreational resources which are also faced with the same kind of demand-supply problems discussed here. Parks often use an advance booking system to ensure that there are not too many campers and hunting licences which are often distributed on the basis of a lottery. To date, these systems have been well received and fairly successful although little economic research has been conducted on what the appropriate numbers of campers or hunters is.

(3) Restrictions by Residence Category

Another possible method of limiting the total number of anglers would be to restrict angling to residents or a specific category (such as Canadians or residents of the province or local region).

> "It is implicit in present policy that residents be given preference over non-residents (lower licence fees ...) with respect to access to sport fishing resources. We could therefore expect access restrictions aimed at maintaining the quality of the sport fishing experience to apply initially to non-Canadian anglers."[7]

Restrictions on non-resident anglers would tend to apply more to the over-crowded southern road-access fisheries than the northern remote-access fisheries. The remote-access fisheries involve numerous lodge operations which are heavily dependent on non-resident anglers and, in general, there are fewer problems of overcrowding and overfishing.

The numbers of fishermen cannot be controlled as exactly under this type of system as under a pricing or lottery system. Obtaining the 'allowable limit' on numbers of fishermen would be more of a hit and miss proposition in that the only thing that can be accurately controlled is the total population of eligible fishermen.

These are some of the options available for restricting the numbers of fishermen at any given fishing site. These options are by no means mutually exclusive and it is likely that we will find various combinations of these in the future. In fact we can find different combinations used today with different licence fees for resident and non-residents, distribution of hunting licences by lottery to provincial residents only, and charging higher access fees combined with a reservations system to ensure an exact level of effort in the Quebec Parks and Reserves. This serves as only a brief introduction to the possible management options and should not be taken as a comprehensive review of their relative merits.

Conclusions

The time has come for sport fishing agencies and interest groups to recognize that obtaining a 'fair and equitable' allocation of the fisheries resource is not the only issue worthy of discussion. The demands of the future suggest that we must learn how to properly use the resources currently at our disposal and not worry so much about obtaining a greater share. In practical terms I believe that we are unlikely to see drastic changes in the existing allocation to user groups in the near future and, given the expense of enhancement and the tightness of budgets, we must learn how to make the best use of a fixed resource.

Habitat protection and explicit allocations are needed if the resource itself is to be protected, however I am suggesting to you that one of the most important issues facing the sport fishery in the near future is the search for fair, equitable and efficient methods of maintaining a balance between the numbers of fishermen and the capacity of the resource in order to protect and preserve the quality and value of Canada's sport fisheries.

Footnotes

1 Pearse - Bowden Consulting Ltd., "The Value of Non-Resident Sport Fishing in B.C.", 1970. Report No. 4, prepared for the Fish and Wildlife Branch, Department of Recreation and Conservation, Victoria, B.C. p.8.

2 Ibid., p.8.

3 Unrestricted public access does not mean that access to fishing is free, although the fees that are paid are generally so low that they do not effectively 'restrict' fishing activity. It does not mean that fishermen

are totally unregulated as there are a variety of regulations on fishing times, methods and catches. Unrestricted public access refers to a policy whereby all 'licensed' fishermen (in a given licence category) have an equal right of access to all fishing waters. The access to licences is not effectively restricted by any form of quota on numbers or market-related pricing system.

4 Pearse - Bowden, Op. Cit., p.52.

5 Ibid., p.57.

6 F. J. Anderson and N.C. Bonsor, "Allocation, Congestion, and the Valuation of Recreational Resources", Land Economics, Vol. 50, 1974, p.57.

7 Pearse - Bowden, Op. Cit., p.55.

Discussion

Ron Johnson: I want to go back to what Terry O'Reilly said that what really influences politicians is economics. Mr. Barber said he doesn't think that the allocation system is going to change much in the next little while. I think that the sport fishermen have the potential to change things very substantially in their favour. I have always been somewhat amazed that the Saskatchewan Wildlife Federation, which purports to represent 128,000 anglers and has 32,000 members which is the largest organized group in Saskatchewan - has never got around to flexing their muscles. What I think is going to happen in the near future, is that some of these groups are going to realize that they have not only the ability to influence governments, but to actually topple governments, and then things are going to change. I would just go back to Mr. Brynaert's presentation and I guess he is more of an expert in how to influence governments than I am. Eventually, outfits like the Saskatchewan Wildlife Federation and the Canadian Wildlife Federation, are going to start to make things go in the direction that they want. I think that we may see some changes in the near future.

Ron Thomas: I was overjoyed to hear about the Habitat Canada Fund but the Ducks Unlimited budget in parts of British Columbia is ten times the Fish and Wildlife Branch budget. Is the duck stamp to do with just ducks? I think ducks are doing reasonably well, and I realize they are expensive, but what about the other species of wildlife relative to habitat?

Ken Brynaert: The DU program is duck oriented. I think what we are looking at was that we had to start somewhere. It is fairly common knowledge that we are going to see a withdrawal of DU money in Canada So, what we are looking at really is withdrawal over a period of time of some 18 million dollars worth of habitat money; knowledge of this prospect really provided the momentum behind the forming of Habitat Canada. What is really interesting about Habitat Canada, and even though it was started as a means of solving this habitat problem as it relates to waterfowl, we have got the mandate to the point of where it can apply to anything. It can apply to anything and I know when we signed the necessary papers with Dr. Mountain, the Deputy Minister of Environment, he said that we may be leaders down the road where fisheries people may decide to have a fisheries Habitat Canada. I pointed that out in

the Constitution: it is there, they don't have to do anything, it's in this document. Well that shook him and it was a bit shocking to him that Habitat Canada is going to be really a much bigger proposition than just looking after ducks.

John Clarke: Mr. Barber, given that the concept of letting demand set the price of a licence, or the price of the admission to fish, how would you solve the social problem that that favours the wealthy against the poor in a common property that everybody is supposed to have equal access to?

Alan Barber: I am not sure that I have a quick and easy solution. I still believe that what I said was that a lot of this lies in the problem of income distribution, the belief that if someone can not afford to pay that price we are therefore taking something away from them. The point I made was that these are the same kind of principles we use to distribute the essentials of food, shelter, housing, and somehow the concept of sportfishing has taken on a special status.

Terry O'Reilly: I do think it increasingly important that organizations, with the backing of their members, start paying more attention to the flexing of their political muscle. If 32,000 haven't done it in Saskatchewan, and an even larger number haven't done it in British Columbia, obviously part of the job isn't getting done. It has to be done and I think that is is a significant thing for people to be considering. I will mention again, Dr. Carter's tireless efforts in making sure that government is at least perpetually reminded that sport fishermen are there and that their argument in both economic and social terms is being put forward.

Howard Paish: As someone who spent four or five years in the mid-'60's trying to make a very diffused group of anglers and hunters into a political force, I find it is generally the individual headline grabbers who seem to get more attention then the careful ones who think things through. The point I have for Alan Barber is that I agree with the intent of his paper. But let's ask Ron Thomas who initiated the Pearse-Bowden work, how much success he would have had pushing the ideas that you used as quotations?

Ron Thomas: I think we have had a reasonable amount of success by 1969 standards but the world is accelerating so fast that, to quote someone else, "you have to run like hell in order to stand still".

Howard Paish: I feel very strongly that you have to look at these things in the context of the day but I found that some of our great 7:30 to 9:30 conservationists are at the fish and game club meeting and between 9 and 5 they are presidents of the local paint plant that is still dumping its junk into the streams and rivers, and so on. So don't lets delude ourselves on that one; they choose to look upon fish and wildlife as something separate in their lives from the things that we make our day by day living by. Unfortunately, too many politicians look upon it in that light too.

Lee Straight: Mr. Barber's presentation distresses me a little bit, because all he has done is identify that common property resources are a very difficult thing to establish. Possibly, if he had gone further, he will know that it has never, never been made to work in the history of the world. There is no common property resource that I know of that so far works, but by stopping after

saying the important issues facing the sport fishery in the near future is the search for fair, equitable, and efficient methods of maintaining a balance between the number of fishermen and the capacity of the resource, you haven't given us a valuable opinion from yourself as to what we should do next. Finally, you say the public has no say in fishing management and are subsidizing the sport fishermen. This is what I get thrown at me as special user all the time. I say they do have a say in fish management, and we are not subsidizing them because they have elected representatives. They have MPs and MLAs who are their representatives. If they are more concerned, why don't they join organizations, stand for office, or recommend people to stand for office. The fact that you have special boards here that are elected representatives shows that they are dealing with our special interests. Thus, it is not fair to plead that the public has no say in fish management and that they are subsidizing the sport fishermen. They really aren't at all.

Alan Barber: With respect to the question of what we should do about the increasing demand for angling, I think in some ways that we are moving towards it by trying to understand what is an appropriate quantity of effort. We are also moving away from the idea that in order to match an allowable catch with an unrestricted access system, we simply have to lower bag limits. Instead of continuing to have more restrictive measures, we are now, I think, looking at what is the capacity of the resource, what is an allowable amount of effort, and what comprises quality and how do we save it? I think fairly hefty raises in all of the license fees would be a good starting point in terms of doing something about demand. I think what the agencies are doing now on quality is a good first step. In other words, you can say I approve of some form of limited access.

Howard Paish: I think we can to some extent get the best of both worlds here. There is a certain threshold level of licence that will likely be politically acceptable, a magic point, sort of, between a political acceptable fee and raising enough bucks. For example, everybody is getting their democratic right with their first five chinook and the first ten coho. That's taking care of your democratic right, that you can expect the rest of the tax payers to subsidize. You get what you pay for. I get a little bit uptight when I watch guys who think nothing about buying a $400 seasons ski pass bitching like hell as they did a number of years ago because of the imposition of a sport fishing licence. I get a little bit choked up about that. If the money thus paid goes back into the resource, it is also going to pay the common property owner who is allowing us the privilege to use the resource. Let's let that sink in. I think that is what is happening, the same as in forestry, mining or anything else. If I want to go out and catch chinook, the first five are my democratic right, the next five are $25 a piece. If I'm hog enough to want to catch fifty, the top one is $1,000. I would like to see smart young theoretical economists start applying their minds to the mechanisms for this. We don't need to fool around with the theory of it anymore, it's fairly straight forward. By paying fees like this, we would be getting the enhancement money that we want back into the resource. We will also be paying for the education programs, the highway programs and all kinds of other neat things through revenues from fish and wildlife, the same way that we pay for them through revenues from forestry, mining and everything else. And in doing that, we will elevate these fish and wildlife resources to the same kind of status in politicians minds as forestry and mining. That's an editorial, not a question.

Ken Cox: I'm surprised that some one has not said something about limited access because it could possibly deal a bit of a blow to a secondary sector which is basically dependent on volume.

Ed Mankelow: You know we can talk about allocation at this level, but allocation basically comes from the political level and we'd better remember that. We have politicians that are still using our deer as welfare species. If you're on welfare, laid off, or you're on unemployment insurance, you can go to the nearest wildlife officer and get a subsistence permit and drive your $20,000 four- by-four forty miles into the bush and get yourself a deer or two. All it takes is to go in and ask, and that is by political decree. So we better remember that allocation is a political thing and that is where we had better be strong. Finally, as somebody else has pointed out, there is a big parallel between the fisheries and the animal situation and we didn't have any trouble restricting access for hunting for birds and game. Further to that, the fishery will eventually go the same way. They used to have commercial hunting in a big way. That just completely disappeared, and more than likely the fishery is going to evolve the same way.

Rolf Paterson: I'm with the Sport Fishing Institute in British Columbia and the President of Daiwa Canada. I'd like to draw a couple analogies to your attention, vis-à-vis the use of the resource and the ability of business people to cope with regulations and changing times. We have a factory, a very large factory in Korea and as you probably know, Daiwa supplies fishing tackle around the world. The value of the fishing tackle, the actual per-piece value of the fishing tackle exported from Korea ranks from low to high. The lowest value goes to the United States. That's changing fairly rapidly. The second lowest value goes to Canada, the third lowest value goes to Europe. Australia is a specific problem because of some governmental interference. The fourth lowest value goes to Japan. Japan has probably today the largest number of fishermen and the least access to the resource and we simply sell opportunity and value to them. I think those are two key words which will come out of this conference as agencies grapple with various problems, and I suggest that we are able to cope with them fairly competently; opportunity and value. If I might just add one other comment, the 1980 Sport Fishing Survey results being presented in 1984 is obviously a tough problem for people in business but we learned to cope with those problems. I submit here and now, to agencies and people like the Wildlife Federation, should they ever be interested in obtaining up-to-date statistics, you can always approach business people because in many cases the sum total of those business people do have accurate up-to-date numbers. It's a little distressing listening to these proceedings. I've not been involved at this level of discussion previously, and suggest my position is that of a viewer and not a participant. Particularly, I worry when I see a lot of things being bounced around between agencies, meaning more specifically intergovernmental departments, not the sum total of the agencies which are brought together at this conference.

Ernie Stenton: Just to quickly recap, the conflicts identified by this panel appear to fall into three groups. There is habitat conflict with other types of resource development which threatens the basic supply of the fish. There is conflict between the use of fish between commercial, sport and other uses of the fish. There seems to be conflict within the sport fishery itself in relation to the number of fishermen, the number of fish available and possibly even between fishermen. I think we should go away thinking about these conflicts because they are only going to become more intense in the 1990's, and we have to start at this point in time working towards some kind of a solution to them.

PANEL 3

DEVELOPMENT AND POTENTIAL OF NATIVE-OWNED FISHERIES

Chairman: Pat Chamut
Director General, Ontario Region,
Department of Fisheries and Oceans

It's a real pleasure to be here at this conference and to have the opportunity to fill in for Gary Vernon. As many of you know, this is my first involvement with the group and I've really found it quite interesting and informative. In briefly introducing the discussion I'd like to talk a little about what it is not intended to do. We are not, at this time, talking about things like food fisheries, land claims or community fisheries. We don't have the people here that can properly address those issues. The focus of this panel is on the economic development potential of native owned and operated sport fisheries. I think that we would all agree that this is a timely and important topic for this forum to consider. As you all know, native involvement as owners and managers of the fishery in parts of the country, and not as just users, is growing. As land claims are addressed and agreements negotiated, native peoples will be assuming a significantly increased role in the sport fishery in many parts of the country. This is a fact which is recognized, and I think it is most appropriate that the conference discuss how native development aspirations can be compatible with the enhancement of recreational fishery development.

Lorne Anderson
Senior Project Officer, Renewable Resources Development,
Department of Indian and Northern Affairs

I'd like to reinforce a couple of things with respect to my remarks on Monday on the way in which the Department and Indian people are looking at the sport fishery. Mr. O'Reilly repeated his remarks this morning about governments thinking in economic terms. That is certainly the way that Indian people are looking at the sports fishery, in terms of jobs, increased wealth and reduced dependency, with the social benefits of positive employment falling out as an important by-product. Ken Cox spoke about the partnership needed to manage the resource. Indian people, contrary to what some people may think, are interested in managing the resource; and I think it is with the assistance of biologists and other knowledgeable persons, such as the people that are here today, that they can realize or be brought to realize that if there are no more resources there won't be any economic development. That was a point somebody else raised the other day. On Monday, my presentation was basically in terms of Indian opportunities as lodge owners and operators, and the employment possibilities within that sector. I would just like to point out that Indian people have been successfully involved in enhancement projects, in particular, here in British Columbia, where they are involved in salmon enhancement through programs called community economic development programs. It is part of the salmon enhancement program, and there are quite a few Indian communities involved in the enhancement end of things in hatcheries, a lot of stream cleaning, and those kinds of things. In addition we've had some discussions with DFO people in the Atlantic region. We have a few bands interested in enhancement and aquaculture projects down that way. Glen Jefferson spoke this morning about the fishing experience as being a valuable resource and the

quality of the fishing experience. On Monday I mentioned that native people think they have a unique Indian experience to offer the consumer. What they now face is the challenge of making that a quality experience. We'll start today, with the regions where we have extensive operator and tourism programs, the Quebec Region, and Walter Walling will talk about how the Department serves Indian people and Indian operators in the Quebec Region. Then, Don McLeod will speak on behalf of the Cree people, who are represented in the James Bay Agreement.

Walter Walling
Tourism Officer, Québec Region,
Department of Indian and Northern Affairs

I would like to give you just a few examples of the type of assistance that the Department of Indian Affairs in the Québec Region has given to the native people that are involved as owners of outfitting lodges or who desire to become eventual owners. We provide, through department staff or through contract personnel, training in the various aspects of how to properly operate the lodges. This training is done on the site during the operation with the owner. This will include the various aspects of the administrative problems in an outfitting business, and also the type of services that the clientele expects in remote areas. I'll give you another example. A few years ago in the Ungava Bay, the farthest north end of the Province of Québec, there were a few operators who were operating on float planes. This started to become very expensive, so we came to the conclusion that the viable way to operate these facilities would be to operate them with Twin Otter aircraft; so this implied air strips. How do you tackle building air strips when you are not DOT, when you are not engineers, and, like every other department, you are short of dollars, person-years and everything else? So we tackled the task in the following way. The Department purchased a small bulldozer which was dismantled and sent by train to Shefferville, the farthest place a train will go. From there it was flown in on a DC3 with skis during the winter time and dropped at the first site. It was then assembled and when spring came, the strip was built. The following winter, the same operation was repeated. Doing this, we ended up building five air strips which can accommodate a Twin-Otter. The camps used to operate with four or five clients at a time, now they are geared to operate with twelve. The native outfitters in isolated areas are faced basically with the same problems as the non-native operators, i.e. the high costs of transportation and operation. Competition is pretty rough and sources of supply are usually far down south. Certain native operators grouped themselves into a co-operative format. Another group, around Ungava Bay, formed the Quebec Inuit Outfitters Association. They work very closely together to do all the purchasing of the goods and services required for their operation. All their booking and promotion is done through one central agency on contract to do booking only for those lodges. The native people realized when they got into that format that they had various types of facilities and species they could offer to the sportsman. They could offer fishing for char, salmon, speckled trout, caribou hunting, and goose hunting. Therefore, it was felt that if once you got a client and you had different types of hunting and fishing you could offer that same client over the years, you could get him to stay in the native camps and build yourself a good repeat clientele. It was also felt important to set up a co-ordinating centre with its costs divided among the individual owners. As a result, you have someone there who will greet the guests and dispatch them to the camp where they are going, and

so make sure that you don't end up with the client in one camp and the fishing gear in another. Also, this co-ordinator handles all dispatching of aircraft, food and supplies. All of you who have northern experience, know that empty aircraft can break your back. The Department also supplies financial assistance to the native people when they want to get started as individual owners in the outfitting business. As Lorne pointed out earlier, not too many lending institutions want to take a gamble on native people. So the Department has its own lending system, where certain criteria are fixed. Naturally, the business has to be feasible and interest rates are charged, usually we use as a base, prime lending rate plus one percent. As for the potential, there is a good potential to develop sports fishing, especially in the isolated communities. At the present time we have ten requests from native people who are interested in going into the fishing and hunting outfitting business. We get many, many requests, but then you can't sit down and say we'll have that many outfitters in the same area. Feasibility studies are carried out and, if they are positive, the native owner will receive technical and financial assistance from the Department. It was mentioned in Monday's presentation that the native people of Quebec are interested in the development of their natural resources because of the good opportunities for employment. This is particularly true in the Quebec Region because of the resources available, whether it be in forestry, hunting, fishing or trapping. For an example, in Quebec 325,000 square miles are reserved exclusively for Indian trapping. This is divided into approximately 1,500 trap lines. And many native people in Quebec still want to live the traditional way of life, and thus they spend many months on their trap line. The fur market is like many other markets, it goes up and down and up and down. So we have developed a trapping program which provides technical and financial assistance to the native trapper to help them set up trapping committees, purchase their equipment, carry out beaver surveys, give trapping courses, market their furs, and other matters related to trapping. In the last few years through this program, camps were build along individual trap lines. So some of the trappers, when they saw that the fur market was going down, try to increase their revenue during the inactive season, by making their facilities available to sport fishermen and hunters. The sportsman gets to live with a native family, let's say for a week, and do a little fishing or hunting in areas which are usually not that accessible. The trapper rents his facilities, his boat, his motor, and acts as a guide for the tourist. A trapper will have one or two parties during the fishing season or the hunting season. In the last three years approximately 50 of these camps were built and about 10 real active trappers provide this kind of accessibility to their territory. Like I said earlier, we're not pushing that program maybe as fast as we could because we are also stuck with man-years and dollar signs, just like everybody else. Furthermore, if you get involved in these projects, I think the follow-up department services that the native people are expecting to get is very important. All you need is one bad example and the word gets around. So that is why we give a pretty good follow up on those types of projects. One gentleman mentioned that in Saskatchewan there was only three native owned operators. The Quebec Region serves twenty of them entirely owned and operated by native people. This creates in these isolated communities about two hundred jobs in some very small communities. In one of these Inuit villages you may only have a population of about one hundred people so therefore, if you have a tourist camp going which will give employment for about 20 persons for 3 months, you've got something big going for that community. So therefore, any requests we get in that type of business, we strongly support and give the native people a hand.

Pat Chamut: I am now pleased to introduce Don McLeod, an outfitter from the Mistassini area of James Bay.

Don McLeod
President, Mistassini Lake Outfitting Camps Association,
Québec

Thank you Mr. Chairman. First of all I would like to make a correction on the ownership of these fishing camps. I don't own these camps. They belong to the Mistassini Crees. They've been kind enough to take me as President of their organization, with no pay and a lot of headaches. The maps given to you will give you an idea of the territory we are talking about.

History

The outside sports fisherman started to be noticed by the local people in the early fifties. They were mostly Americans who were looking for adventure and good fishing. These people started to travel the rivers and lakes, as well as fly into lakes, with their equipment which they had to haul all the way from the States.

In the early sixties, some non-natives in the area started to see that there was money to be made from these people. Within the next 10 years there were approximately 20 or more new outfitters in the James Bay Region, with one or more camps each. Since the price was low to get into these camps by plane and cost to fish there was cheaper, it was better than hauling all your equipment up. These new outfitters were doing well.

The Quebec government started to open up their own camps and campsites for the public. This started a problem as the individual outfitters weren't going to sit back, watch these camps start to take their clientele. In order that the individual outfitters wouldn't complain, the Quebec government didn't promote or advertise their main camps.

The Department of Indian Affairs started to assist some native people in the James Bay area in developing their own outfitting camps. Most of these camps opened were goose hunting camps.

During these 20 years the native people were hired as guides, chore-boys, labourers, kitchen helpers, maids, waitresses and laundry persons. These jobs were available for approximately 2 to 3 months of the year for them, and if they were satisfactory, they worked each summer.

The Department of Indian Affairs started to try to get the native operations run by the natives, but there were problems with this.

Changes That Came

In the month of November 1974, the Cree natives, Inuit, Quebec and Canada signed the James Bay and Northern Quebec Agreement which was going to change the roles of the native people in this region.

There are several sections of this James Bay and Northern Quebec Agreement which effect the fishing activities in the James Bay area. The following includes some of the main items, or topics in general, that explain the important roles now played by the native people in this area.

Section 4: Territorial Descriptions.

Section 5: Land Regime.
- These sections explain the lands put aside for the native people and their rights on these lands.

Section 22: Environment and Future Development Below the 55th Parallel.
- In this section there is a James Bay Advisory Committee on the Environment where 4 members from each of the parties - Cree, Quebec, Canada - are represented, plus a chairperson - approximately 13 members. This group reviews any major project and puts recommendations to the developer on the regulations and laws on the Environment, plus the parts in the Agreement, they must respect. The projects which are reviewed can be from any person or party, eg. Quebec, Canada, native, Inuit, etc. North of the 55th Parallel the Inuit have a similar committee.

Section 24: Hunting, Fishing and Trapping.
- Hunting, Fishing and Trapping Co-ordinating Committee is formed where 3 persons from each - Cree, Inuit, Quebec and Canada - are represented. This committee has one of the most important duties concerning sport fishing activities. In order for the outfitters to continue their operations they must respect the regulations and laws, plus environment regulations and laws, and rights of the hunters. Each year, all permits issued are reviewed by this committee - if there are any complaints by any of these parties, the outfitter will be asked to explain them or the permit is withheld until he/she does as requested.
Any changes in regulations and laws are tabled at this committee, plus some of the discussions are open to the public.

- In the last two sections I mentioned I hope you noticed that the native people in the James Bay area are working with the governments more closely than before.

Section 28: Economic and Social Development (Crees).
- This section deals with the funding rights of the Crees of James Bay area and different agencies to be formed.
It should be noted that the Cree people didn't lose the right to program funding and technical assistance provided by Canada and Quebec, because of the cash settlements.
There is a part where it mentions that Crees are to be assisted in feasibility studies in developing a Cree Outfitting and Tourism Association.

It is from this point I will try to explain how the Crees are doing in this field of activity, plus the problems encountered during the last ten years.

After the signing of the Agreement these certain sections were given more important review before tourism. Therefore, there was no major involvement in tourism until approximately 4 years ago by the Cree Regional Authority.

The Cree Entities, C.R.A. and C.S.B., in the late seventies, made an effort to explore the field of tourism with a pilot project in the area of Chisasibi. This pilot project was to obtain information on tourist operation and training courses for the young Crees interested in the field of outfitting and guiding. This operation was run for two years, for this information.

In the Mistassini community the Cree people had established a Mistassini Lake Outfitting Camps Association, which was a non-profit organization. This Association had to be formed because the members of the community were requesting the transfer of the two camps and its outposts from the Quebec government. The Quebec government was closing down some of these operations, which were to be transferred in 10 years to the community.

This Association, with the aid of Band Council and Cree Regional Authority, managed to secure a three-year contract with the federal Manpower's Local Employment Assistance Program (L.E.A.P.) with funding to do feasibility studies, and operations during the next three years.

During the operation of these camps it was noticed that parts of the buildings and other main areas had rotten timber. The Cree operators had to start a big repair program, which was going to cost them approximately $198,000 for new equipment and repairs.

The cost to promote these camps were going to be at the average of $20,000 or more a year, as these camps were just starting to advertise in the States.

The camp operations are run by Cree native people, except for the two cooks (French type), promotion director and accountant. Cree native persons will be trained into these positions, as time goes along.

Since these are two very large camps, they are costly to run; therefore changes are made to cut down the cost. When we took over all cabins had oil heaters, which we changed to wood stoves. Transport - all was done by float plane; now we do this by water. By these changes, this Association gives work to the native people, as these are some of their skills.

These camps can handle 32 people at one time (Louis Jolliet), and 28 persons at one time (Vieux Poste), plus each outpost can handle 4 people plus guides. At the present time we try to keep a maximum of 20 guests at one time at either of the main camps.

Besides these activities, M.L.O.C.A., M.B.C. and M.L.C.P. Quebec Tourism Branch are working together on a tourism development proposal in the Mistassini Lake area to be submitted to the Hunting,Fishing and Trapping Co-ordinating Committee for approval.

There are other native camps in the James Bay region, but these have not gone into too much promotion yet. Then there's the non-native outfitters in the area who operate individually and are trying to re-organize as an association.

Some other points I should mention are the different types of Category lands in the James Bay region.

Cat. I lands - which are 2,158 sq. mi.

Cat. II lands - which are 25,130 sq. mi.
Natives have exclusive hunting, fishing and trapping rights in these lands.

Cat. III lands - natives have the right to develop more than non-natives in next 30 years after the Agreement.

With these topics mentioned, it should be recognized, first, that the James Bay Cree people are very interested in this field of activity, in order to generate employment, revenue on the resource and still have a control through the Agreement and their system. Second, that the James Bay Crees want to be involved in any planning on tourism in their region and understand it can only work if all parties from different areas are also involved. And third, it should be understood that the Cree people will be seeking funding for these activities, as they wish to start to develop this resource.

In this presentation I didn't mention commercial fisheries, but there are two native people interested in this field too - one is on sturgeon, the other is on trout, walleye, and pike in our area.

Number of Square Miles

Community	Category Lands # I (A-B-B*)	II
Fort Rupert	303 sq. mi.	3,947 sq. mi.
Eastmain	189 sq. mi.	1,384 sq. mi.
(Paint Hills) Wemindji	198 sq. mi.	2,634 sq. mi.
Fort George (Chisasibi)	523 sq. mi.	6,305 sq. mi.
Mistassini	533 sq. mi.	6,896 sq. mi.
Waswanipi	231 sq. mi.	2,949 sq. mi.
Nemiscau (Champion Lake)	59 sq. mi.	784 sq. mi.
Great Whale River (Cree)	121 sq. mi.	
Near Village (Inuit)	5.9 sq. mi.	1,660 sq. mi.
Approx.	2,158 sq. mi. (page 55)	25,130 sq. mi. (page 66)

Discussion

Ken Brynaert: I would like to make a comment. I had a very pleasant experience last year visiting and spending some time at a native camp out of Fort Chimo on the Willow River. I have to say, without any equivocation, that was one of the finest experiences one could attain, both from the quality of the results, the quality of the camp and the way it was operated. I was so impressed with it that I'm taking 12 people from Europe this fall. They really have a first class operation. I understand in checking around with the other

camps in the area, the Finger Lakes and so on, that there is the same quality of operation. I think that native people are doing a good job and that kind of operation should be recognized and commended.

Charles Livingston: Mine is a question of clarification. It was mentioned that native people found it hard to get funding and the inference could be made that they were bad risks and I know this not to be true. They are not bad risks by nature but they certainly are bad risks by law and perhaps the gentleman would like to explain that.

Lorne Anderson: Basically it is a result of the Indian Act. If Indian people default on an activity on a reserve, the bank can't come and, in due course, seize assets on the reserve. In a lot of cases of businesses on reserves, we have a lot of problems with banks, although things have changed quite considerably over the last year. As I said the other day, we are now a lender of last resort. We really work with the Indian business people and with the local bank, if we can, to convince them to lend them money. And in some cases we guarantee the loan rather than giving the loan from our own fund. But the problem is basically because of the Indian Act.

Ed Mankelow: Last year the native band at Cowichan stopped the food fishery to allow enough fish to escape so that they could get healthy escapement, which was very commendable. They didn't have to do it. But what has always bothered me is that I know from getting information on the disbursements from Treasury Board, about the hundreds of thousands of dollars that individual bands on the Island are getting to do these projects. I also know, being personally involved in a number of them, the trojan work that is being done by the individual fish and game clubs. A fantastic amount of work is being done by scratching around for the odd dollar and, except for an administrator, by completely voluntary labour. I really wonder whether this money is being spent to produce fish or to produce jobs and it might be very interesting to see a sort of benefit-cost analysis of the two different types of projects. I do say and understand that if you are looking at the long term, nothing but good can come out of this. There are a lot worse ways that the money could be spent, and certainly if you are going to involve people like this in interesting projects, you've got to make it big enough so that they figure it is worthwhile and will do the job. But the relative benefit-costs have always bothered me.

Terry O'Reilly: Unhappily, there is very little representation at this conference on the part of the British Columbia Indians and that is a bit sad because this resource is so especially important to native people in this region. I think this is so everywhere in Canada, but especially here because such a large percentage of native people rely on the resource not only as a means of subsistence but as a base for economic development. Recent developments in British Columbia with respect to native interests in the sports fishery and the approach of native people in British Columbia to the fishery, are quite enlightening and important to comment on. Recently, the Native Brotherhood of British Columbia, which has historically been a commercial fishing organization, was the single commercial organization in the Minister's Advisory Council to come out unequivocally in support of the aspirations of sports fishermen in this province. They also added that they were looking for development in the sports fishery as a possible spring-board to their own economic development. I think that these are significant developments. Certainly a recognition among commercial groups is an additional value, but

also the recognition that here is an activity where in harvesting the benefits the economic benefits from harvesting the natural resource can be increased without a proportionate increase in the number of fish taken. The data show economic returns on a per-fish basis is much greater than in the commercial sector. Another point I would like to mention is that in this province there is a great deal of misunderstanding about the position of native people in the fishery. Beside mention about some groups that have stopped fishing to allow for the rebuilding of stocks, there is the situation with respect to the Qualicum Hatchery where the Qualicum Band have been taking surplus hatchery fish and have set up a distribution network over the past several years to provide food fish to other bands. What wasn't understood was that this was being done because those other bands were taking their food fish from rivers where the stocks were quite weak. An arrangement was made to provide the food fish from the Qualicum Hatchery to allow those other bands to stop taking fish from those rivers where the stocks were weak and needed to be rebuilt. Having established that distribution network, those stocks in fact did rebuild and the need for redistribution of the fish on a food fish basis therefore disappeared. Because there is thought being given to allowing for some commercialization of food fish in exchange for a numerical management system, that distribution system was utilized as a test pilot for commercialization. Those of you from British Columbia will know, and for those who do not know, this has turned out to be one of the most controversial events that has occurred in the B.C. fishery in the last year. We have an industry in absolute crisis and a resource that is also in crisis, yet this kind of fear and concern overtook most of the more serious concerns regarding the state of the resource and the economic crisis of the industry. Much more has to be understood and I think that we should be encouraging dialogue with native people and encouraging the opportunities that present themselves to native people in the context of the sport fishery as against those opportunities in a commercial fishery that relies on such enormous volumes of take.

Jim Gilbert: I am a charter boat and guide representative on the Sport Fishing Advisory Board, a trained fisheries biologist, and a second generation sports fisherman and businessman involved in the sports fishery in British Columbia. I am also representative, in a nebulous way, and advisor to the Southern Vancouver Island Fisheries Tribal Council to help those people on fisheries matters. With those credentials, I feel somewhat qualified to speak on the possible confusion regarding government funds used by native people on Vancouver Island. These funds have been used, to my knowledge, not for access for sport fishermen to the resource, but more directly for the production of salmonids on water courses, on Vancouver Island within the bounds of Indian reserves. I think you will recall that Mr. Wright gave a clear picture of where we are in British Columbia with respect to the native Indians for the last five years on the board that I'm privileged to sit on. I've been expounding at great lengths, that as far as I'm concerned, on the matter of the salmonid resource in British Columbia, the natives hold the trump card and we as sport fishermen in our best interest should not align ourselves, as quote, enemies, to the natives. It is interesting to see that within the last six months we've had a complete change in the thoughts of a seine boat operator on the Minister's Advisory Committee representing the Native Brotherhood. The minutes from that Committee showed six months ago that this gentleman was complaining that charter boats in the northern coastal areas of British Columbia provided a platform to tourists who have access to the resource for 365 days of the year. Their position now is that they are very interested in

getting involved in the sports fishery. The old adage, if you can't beat them, join them. He realizes the potential within British Columbia of the development of the sports fishery, as the people have in the east. And I will take the message back to the people that I have some degree of input with, and say that it is very fortunate that there are other native groups within Canada that have taken the lead in this. It is particularly interesting to hear the quality of service that Mr. McLeod's people are willing to offer.
I believe that quality of experience and quality of facilities in the sport fishery is where it is all at. I've been a professional guide for 40 years on the coast here in the salt water salmon, angling myself, and as Mr. Wright stated Monday, we're the major charter boat operators on the coast and we are going to offer our services voluntarily to travel to the native communities on the coast to offer our services and our expertise to these people, free, to encourage them to become involved in utilizing some of the stocks of finfish that at present aren't being utilized on the coast. We hope that they, in turn, will be able to utilize the information that the people in the east have been able to put together so that they can have shore platforms as well as mobile platforms to offer quality services to the sports fishery.

Ron Thomas: I would like to ask Don a couple of questions about management. How are harvest levels set and catch limits enforced?

Don McLeod: Catches are regulated by government conservation officers. They check the quota, and then as an outfitter, we have to make sure that the people coming in do what is recommended to them. As for the Category 1 lands, natives have by-laws themselves and they have closed some of their lakes because they have been over-fished. One is close to the community which they call Trout Lake. You can go in there in the spring and catch 40 fish in one day. But they closed it because there are only small fish there now. So this way they are ensuring conservation.

Lee Straight: I'd like to make several observations, first wearing one hat and then another hat. As a DFO recreational fisheries advisor, I'm sorry that Mr. O'Reilly has introduced this experimental fishery on the Big Qualicum. Really, it hasn't much to do with recreational fishing. It has to do with subsistence fisheries, and it is acknowledged that it is an experiment and it will probably work out fine. I'm now going to change my hat to that of a member of the Steelhead Society. The Society sort of represents the river angler and they were invited to send a representative but they had an annual convention on their hands and so they didn't send anybody here. I am now speaking for the Steelhead Society and I would like to put on the record that we are disappointed that the Indians don't have a B.C. representative here. This is because we see the greatest potential for the native lies in supplying orderly, paid access to the recreational fisherman. Never mind having to fly anglers into the far north, nor to set up a big guide system, take them to school, or anything else. There is no other province that probably has so many key spots on rivers controlled by Indian reservations as British Columbia. Every river I have grown up loving over the years, I've ignored the Indian reservations, ignored their rights and just wandered through their reservations. All of a sudden, I started tuning into their distress about their land claims and their confrontation with the non-Indians in order to try to reach a settlement which is very slow coming. So they are barring sportsmen access to key rivers. They started, first of all, on the Cowichan River near Victoria, then the Squamish River, and now it is in many, many spots; both

hunting and fishing. Now these are prime places for development of a principle. Every sportsman, when he goes to Alberta or Saskatchewan hunting, has learned long ago that he has to knock on doors to get decent treatment on the farmer's land to chase game birds. Getting permission of some sort worked very well on the Cowichan River, where they sold a little card every year to give you the right to fish on the Indian reservation part of the Cowichan below the main highway. Now, with confrontation, they withdrew that practice and you couldn't buy that card. In other words, they refused to allow any access. I'm used to fishing the Bella Coola River, which is a prime steelhead river where there was a good recreational fishery. The Indians controlled the lower reaches of that river and we used to castigate them because they had a subsistence net fishery at the lower part of the river and we were afraid the records were poorly kept. We doubted the reports that they supplied Fisheries about how many steelhead they were taking and we fancied they were wiping out the steelhead run. So I talked to two or three Indian residents up there about the fishing and I said, "Why don't you sell us permits, why don't you quit netting these fish? All they are replacing is canned salmon for you, except in some of your rituals, and why don't you convert them into tourist dollars, soak the heck out of us and let the run return". You know, we thought they were wiping them out. It turns out that the Indians are not at fault at all, it's probably interception by the commercial fishery outside. I'm sorry to be so long about this but I want to explain to you that this is over a period of 30 years. Anyway, I was told that they were not going to settle their rights on a piecemeal basis. This explains confrontation. Now whether that was from an Indian band or whether it was the opinion of one person, I don't know. Their resistance at that stage and their demands for settlement were fragmented, as they still probably are. But the point I'm leading up to is to never mind what Mr. O'Reilly mentioned about giving them some revenue to pay for the enhancement in which they are participating. The greatest single potential for the least effort in Canada, I am certain, lies in restricted access and selling admission to all these prime rivers in British Columbia, and maybe in New Brunswick, and so on. I'm surprised that you don't have a representative here from those people and I would suggest that Mr. Anderson take this all under advisement and plead with them to get into such a plan. I'd be glad to pay whatever they charge, depending on my means and depending on how good the river is for access.

Wilf Carter: I always enter these discussions with trepidation. I don't have the same credentials as Jimmy Gilbert, but I was threatened with scalping twice in the same day, which is quite an important credential. I deserved it once and I didn't deserve it the other time. My good friend Graydon Nicholas, who I hoped would be here, threatened to scalp me the first time because, in a moment of misguided thinking, I suggested that one way to solve the complex problem that we were having with Atlantic salmon and native fishermen would be to ask the federal government to negotiate with the bands concerned to seek to extinguish their rights. Graydon threatened to scalp me for that remark, and I deserved it. That same day, one of my own board members threatened to scalp me the second time because I apologized to Graydon for the remark. I started to feel like the fox in the story of the lady who was visiting the fox ranch and who said to the farmer, "These are such magnificent creatures, tell me, how many skins a year do you get from each fox"? And he looked at her and he said, "Madam, we only get one. We find skinning them more than once makes them nervous as hell". I'm sorry again that Graydon isn't here to speak more elequently than I can on this, and I think perhaps Claude Bernard could also.

I just want to mention a very positive development in the complex problem that we have been having with Atlantic salmon and the native people. On the Grand Cascapedia River in Quebec, one of the finest Atlantic salmon rivers in the entire salmon world I would venture to say, the management of that river is based on a partnership between the local Indian band and the local community. That arrangement didn't come very easily, and the Quebec government took the initiative in making that happen. I'm very pleased to see, as many others are, that it is working extremely well and that example is the kind of cooperative management approach that we would like to see extended. We would like to encourage Indian bands to use the Atlantic salmon resources for the highest economic return that it can bring them. That isn't by setting nets and harvesting a substantial volume for food. The highest possible economic benefit for them would come from the type of operation that the Grand Cascapadia represents in getting involved in sharing in the management and operation of some of those rivers for the recreational fishery. I think that that is a wedge in the door for the Atlantic salmon fishery. It didn't come easily. It is still not totally accepted by some people, but I would like to go on record as saying that we certainly endorse native people enterprise in the recreational fishery. In particular, we would hope to encourage and provide support to bands who would like to convert from a food fishery to a recreational fishery. We think that is the way to go for them, and for the salmon too.

Terry O'Reilly: I feel it necessary to respond to something Lee said about the lack of relevance of the Qualicum situation. In the first instance, the use of surplus production from one hatchery to assist other bands in taking pressure off other stocks impacts favourably on all other fisheries. The second and most significant, however, is that the emotional and negative reaction to the subsequent use of those surplus stocks is certainly not the kind of reaction likely to bring about an atmosphere that could result in the reintroduction of the kind of priced fishing privilege in some of those rivers that you mentioned Lee.

Roger Liddle: There was a comment made that from a funding viewpoint that tourism industry is a bad risk. That is a common problem all across Canada. It is not a native problem. It is an industry problem. We find it in Ontario. Most of our operators have extreme difficulty in going to lending institutions to find suitable financing. I'm quite pleased that the natives are interested in tourism and tourism development. I'm sure that any of the tourism associations across Canada, and I'm speaking on behalf of Ontario, that we all offer our full cooperation and support to natives in achieving similar common goals. Relating to Ontario specifically, maybe you weren't aware that the northern part of Ontario right now is undeveloped as far as tourism goes. The Ontario government has commissioned a study to be done on development north of the 50th. We, as an industry, put together a discussion paper for what is called the Royal Commission on Northern Environment, talking about tourism development, and I would like to offer you a copy of this. You may find comments in there relative to tourism and development that might be applicable to other parts of Canada. Finally, this morning it was suggested that the outfitter industry lives more off the profits from selling a resort than the profits generated on an annual basis. Is this the case in northern Quebec?

Walter Walling: Like other outfitters, there are good years and bad years but the ones in the Ungava Bay area have made profits every year. The outfitters did not pay for building air strips but what they did contribute was their time.

Roger Liddle: I'm quite pleased to hear that. I know in Ontario there are some operations that do exceptionally well and others where it is a way of life rather than a business.

Walter Walling: The natives in northern Quebec have realized that the type of trips they are selling are very expensive and therefore they have to give top notch service if they want that type of clientele to come back.

Doug Brown: From a Labrador perspective, we don't have any natives running fishing camps but I get the impression that Quebec is far ahead of other provinces in this regard. I wonder whether you would advise the natives in other areas of Canada to get land claims first before this kind of development takes place?

Walter Walling: With respect to the Ungava Bay area, some of the camps started operating before the James Bay Agreement. It was not the agreement that triggered them to get involved in outfitting business. For example, I mentioned the Finger Lakes where there is a little Inuit village of about 100 people. There the people themselves came to that conclusion that something had to be done if they were going to create employment and this is where the idea of the tourist camp came up.

Roger Liddle: As far as Ontario is concerned, the development of those opportunities is very much on the minds of Ontario Indians. In the proposed Ontario Tripartite Agreement there are provisions that make it abundantly clear that in certain areas Ontario Indians are looking within Indian lands for exclusive rights to run the outfitting and tourist sport fishing industry.

Ken Cox: As far as I know, up to about 5 years ago there really was no interest by the Inuit or Indians of Labrador in new development opportunities. But Labrador has some of the most fabulous pike fishing and some excellent lake trout fishing. It's just one of those things in Newfoundland and Labrador that nobody pays attention to. They think speckled trout, they think Atlantic salmon, and I think there are some opportunities there.

Ron Thomas: I would like to ask Don McLeod why you would be interested in exploiting the fishery as a commercial fishery when you are doing so well as a commercial sport fishing industry?.

Don McLeod: To be honest with you, I'm not interested in it. But it is part of my job as an economic development officer of Mistassini, and when a person comes with a project I have to submit it. And as a spokesman for a sporting outfit, I oppose it, so I'm sitting in two places right now.

With regard to the question of our prices, at our two main camps we are charging $225 per day to go into the fishing camps. This includes the gas, guides, French cuisine and lodging. Plus, you have to pay for your air transport to get there. Our average trip is between 3 and 7 days and last year it cost about $250.00 a day, including their whole transport in the package.

Walter Walling: The trips to the Ungava Bay area are between $1,500 and $1,700 a week out of Fort Chimo.

Jim Culp: I'm also wearing two hats. I'm project manager for the Community Development Project in the Terrace area here in B.C. and I would like to clarify the situation regarding native involvement in Community Development Projects and Public Involvement Programs. They are two different kinds of programs. Community development programs are set up to provide employment opportunities to primarily native Indian bands in the province of B.C., where unemployment is high in a particular community. Also, the same programs are applied to other communities in the province where white people are involved in a particular project. Public involvement projects are just that: there are no monies made available to employ people. And with respect to my other hat, I'm also recreational fisheries advisor to the north coast area on a part time basis and I would like to respond to Mr. O'Reilly's suggestion that sport fishermen aren't being involved in encouraging native people to get involved in the sport fishery. Over the past year, I have personally had discussions with the Kalum Indian band. They have an excellent opportunity to get involved in guiding in the tourist business in our area. They are located in a perfect spot for this kind of thing. We've certainly been behind them, but they are slow in responding and they do have a glorious opportunity to get into something that would be very viable. As well, I've talked to an Indian band on Babine Lake, about another opportunity to guide on the upper Babine River. It is an excellent opportunity to get into a guiding operation that would be more than viable.

Lee Straight: The point I want to drive home is that my proposal for selling access cards doesn't involve any training or retraining, or anything. They live there. They own that land. We want access across it. We have this situation all over the world and it is natural for them to go right into selling cards to walk across their pastures. It's a huge source of income if it is worked right. If there are too many of us, and the fishing isn't too good, well then, you can double the price and the next year double it again until you get a few rich people who will go in and pay a couple of hundred dollars just for one days fishing in the Bella Coola.

FIRST WORLD ANGLING CONFERENCE, SEPTEMBER 13-18, 1984

Michael Leech
Assistant to the President

For the people here that may not be familiar with the International Game Fish Association, we are an organization that certifies and recognizes all the world's records in freshwater, saltwater and fly rod that you Canadians are sending down to us all the time. We are now recognizing virtually every species of fish in the world so as to do our small part to help take the stress off some of the more glamourous species that we've been worried about here. We are a non-profit international association that is headquartered in Florida but we've got representatives all over the world, including six in Canada. By the way, that is another hat that Lee Straight wears, as one of our reps up here.

Some time ago we recognized the need for a world forum on recreational angling. We have had regional, national and all other kinds of forums, but never a truly global get-together on recreational angling. We thought that the International Game Fish Association would be the logical sponsor for such an event and now, with the help of the National Marine Fisheries Service, we have planned such a world conference to exchange and discuss information, ideas and problems related to the conservation, management, scientific research, development and enjoyment of recreational fisheries. We wish to promote international cooperation and establish closer ties among anglers, sport fishing organizations and fishery scientists the worldwide; develop new concepts and programs to improve internationally, recreational fishing opportunities and satisfactions; discuss, review and disseminate information on subjects of greatest interest to anglers, fisheries scientists and managers, educators, recreational fishing industry leaders and others; and to make available information on as many fishing areas and products worldwide as possible. All this information will be put together in book form at the end of the conference and distributed to the participants and other interested people. The conference is going to be held on the Mediterranean coast of France, at a little resort community called Cap d'Agde, September 13-18 of this year. We have negotiated rates at the hotels there, obtained discount prices from Air France and the registration fee is nominal. So, we are going to make it as attractive as possible to get representatives from all over the world.

OPEN DISCUSSION

Gil Radonski: In response to some questions, maybe I can tell you a little bit about our organization as it might give you some ideas on how you might approach some of your problems. The Sport Fishing Institute was formed in 1949, primarily by a group of fishing tackle manufacturers who thought they needed an organization that would address some of the fishery resource questions that the fishing tackle industry was facing. They recognized that if they were to have sales of their products in the years ahead, it was dependent on a strong, viable fishery resource. This would be their way of buying industry insurance. The famous saying goes that a member of the American Fishing Tackle Manufacturers Association got up and said, "we've milked the cow long enough, it's time to feed her"; and that is the philosophy that SFI was built on. Preserving the resource became the goal and they did this by organizing the Sport Fishing Institute, staffed by trained fishery biologists, to interact with the professionals managing the resource and by making the problems known of the sport fishing industry. The primary vehicle used to influence the general fishery profession is the Sport Fishing Institute Bulletin. It is published ten times a year and it's provided gratis to fishery professionals, outdoor writers and informed laymen within the United States. We used to send it all over the world, but we are really trying to influence people within the United States. We had a postage bill approaching $9,000 for mailing outside the country and last year I made an arbitrary decision that if anybody wants to receive the bulletin outside the United States they are going to have to pay $10 to cover mailing and handling costs. The bulletin is used as a way of editorializing on American recreational fishing policies. We have acted both as advocate and constructive critic of governmental fishery policies whether they are at the state or federal level. We have done it by dealing with questions by means of our professional staff. We have five fishery scientists on the staff and we have been very successful because we have argued on the basis of fact, and not emotionalisms. I would suggest that if you are an informed layman, rely on the professional, hire somebody that can make your case. When you have a question of law, you hire a lawyer, if you have a medical problem, you hire a doctor. Go to the professional, and use him and make your case, not on emotions but on fact.

We had a running gun battle with the National Marine Fisheries Service, Dr. Hutton's group for many years because they were very commercial fishery oriented. Dick Stroud, who ran the Sport Fishing Institute before I, was on their back, day in and day out. I think that the National Marine Fisheries Service used to dread the publication of the bulletin because they knew they were going to be lambasted and they were going to be lambasted based on fact, not on emotions or innuendoes. And many times we had the support from inside the National Marine Fisheries Service, much of the data that we used to make our case was from people within. We worked with them, they gave us the facts and you build your case. We were very successful.

The National Marine Fisheries Service, as Dr. Hutton told you earlier, implemented a recreational fishery policy. We had fought for a recreational fishery office within the National Marine Fisheries Service, an identifiable office within that group and Bill Gordon, the Director of the National Marine Fisheries Service, argued against it. In essence, he said "I do not want an office, I want to develop a policy that is woven throughout the fabric of the National Marine Fisheries Service so that people just can't attack the office.

We will judge everybody's performance and we will have recreational fisheries built within habitat protection, within enforcement. Everybody within the outfit is going to know that recreational fisheries is around". Now, the policy has not been in effect that long and there are still people dragging their feet. There are many people within the National Marine Fisheries Service that still harbour their roots in the Bureau of Commercial Fisheries, from which the National Marine Fisheries Service was born. So, we have still been fighting to see this program in action, and it is happening. We have made tremendous strides.

Now, keep in mind that the National Marine Fisheries Service is handling only fisheries in the marine environment. Our inland waters of the United States already are pretty much relegated to the recreational fishermen. The last bastion of commercial fisheries in inland waters was the Great Lakes. Fortunately or unfortunately, depending on how you want to look at it, we had a problem in the Great Lakes with contaminants. In one case it was PCB's, in another case it was mercury. The fish were deemed unfit for human consumption in interstate trade, so commercial fisheries were shut down. We saw Lake Erie, which had a tremendous walleye fishery, closed down to commercial fishing because of mercury contamination. When they took the commercial pressure off that fishery, it expanded beyond belief. Right now, it is probably the finest walleye fishery in the world, and there is no commercial fishery on it. So we don't have the same battle inland. But regardless of the political system, you, first of all, have to articulate your problem. You have to identify the public officials that are making the decisions, hammer on their doors and make your case intelligently.

Ken Brynaert: It seems to me that you are describing the exact same structure as the Wildlife Management Institute.

Gil Radonski: Yes, the Wildlife Management Institute is concerned with the same problems on the wildlife side. They were formed about 1926, I think, and we are modelled after the Wildlife Management Institute.

Ken Brynaert: I am hearing little rumbles that the Wildlife Management Institute may have some problems in terms of their funding. For some reason, I get the impression that the firearms manufacturers feel that maybe they put more into this than they are getting out of it and it gives rise to the question of whether an organization should depend on one specific group.

Gil Radonski: WMI is reported to have some financial strain not because the shooting arms manufacturers have lost interest in their program but because in the United States the shooting arms manufacturing industry is depressed. Regarding the Sport Fishing Institute, when we were formed they decided that we would have a three man staff of professionals, and for many years the fishing tackle manufacturers covered all expenses. When inflation started running rampant and we had recessions at the same time, support waned and right now our funding is about little better than 40% from fishing tackle manufacturers. Myself and my staff contract for services in a number of fisheries areas and right now over half of our income is from contract services. Now, if I were setting up an ideal system, I would opt for setting up an organization with an endowment that has operating funds in perpetuity.

Lee Straight: I see a tendency, in our province at least, for more specialization. As the population is increasing, you are getting more interest in single pursuits, such as steelheaders, salt water fishermen, and so on. It is conceivable down the road that the power people will listen to these specialized groups. Even though the Steelhead Society of B.C. only has 600 or 700 members, they really are the spokesmen for the river angling. Now, they are outnumbered by the Canadian and B.C. Wildlife Federations, but when you go to conventions of the B.C. Wildlife Federation, you have anglers voting on big horn sheep regulations and vice versa. I predict that the power organizations are going to be like the Sport Fishing Institute, one of which has grown up in B.C. already, the river fishing societies, the sea fishing societies, the big game hunter groups, the trophy hunting groups and so on.

Ken Brynaert: I wish to to address the point raised regarding the spin-off of the special interest groups. I think that happens usually as a result of some crisis. The role of the Canadian Wildlife Federation is to deal with the broad issues, and we can. I heard comments around this table from the B.C. Sport Fishing Institute, they said hell, we can't get a message to Ottawa, and that is essentially true. Thanks to the Wildlife Federation you don't have to take the message to Ottawa. The CWF is there and the message is constantly being worked on. Where I think the Federation has been remiss, is that we have concentrated on the mammal species, the hunting side. I quite agree with you there, but there is a change coming about, by virtue of people like Bob Martin, coming on our board of directors. I think we can be effective in representing, not just our affiliate organizations, but your steelhead society and whatever other organizations that may have an interest in fisheries.

Ed Mankelow: On the points brought up by Lee, nobody would agree more that the Wildlife Federation has got a problem. We have always had a problem, and we are working through this one and we will come through. If somebody here tells me in Ottawa that they never got some representation from the B.C. Wildlife Federation on fisheries matters, then I can only say they weren't in Ottawa. We got information to the Minister that there was something going on in B.C. and it wasn't the Steelhead Society that got all those letters back in Ottawa on those regulations, it was the B.C. Wildlife Federation and regional representation of the Canadian Wildlife Federation.

Gil Radonski: We have a lot of different groups in the United States too, fishery groups. We have the Bass Anglers Sportsmen Society, Trout Unlimited, Steelheaders, Salmon Unlimited, Stripers Unlimited, Fly Fishing Federation, I could go on and on. But they are specific interest groups. Our interest covers the broad spectrum. The Sport Fishing Institute does not attempt to get involved in localized issues such as Trout Unlimited and others do. We leave the local issues up to those groups and we try to operate at the national level. I would like to to say that I have enjoyed this meeting and I particularly enjoyed the opportunity to sit next to the Fisheries Minister the other evening. I asked him why he is so interested in the recreational fisheries and he gave me an answer that I really wanted to hear but which I didn't expect. He said he was interested in recreational fisheries because it represented quality of life for Canadians. He didn't say it was economics, or anything else. I enjoyed hearing that because on our Sport Fishing Institute Bulletin, on the masthead, it says, "The Quality of Fishing Reflects the Quality of Living".

Thursday, February 16, 1984

OPEN DISCUSSION CONTINUED

Archie Tuomi: As our first item, Svein Mehli brought over a number of copies of a report, "Man's Best Friend: Studies of the Psychological, Social and Economic Importance of the Dog", prepared by Dr. Ingemar Norling of Goteborg University, Sweden. Ingemar is known to many of us, having attended these conferences, in Victoria in 1972 and Québec City in 1974. Ron Thomas has, as a result, asked whether this means we are going from angling to dogs, or dogs to angling.

Howard Paish: This is the first of these conferences I have been to, and while sessions such as this are just incredibly important to bring governmental and non-governmental types together, we have to understand our relative roles in all this. There is a certain amount of caution by some of the governmental people here, understandably, to talk about things that may not be politically acceptable back home. We have to make sure that the Minister is hearing the same thing from both sources. If the Minister is hearing conflicting views from his senior technical staff and from his political constituency, certainly from the user constituency, they very quickly cancel one another out.

Ken Cox: I would be interested in finding out if any of the provincial agencies have given any thought to putting any guidelines on derbies because I was quite upset by a derby that went on in Ontario last year based on the total weight of whatever you could catch.

Lee Straight: For 35 years, I was the major staff man for one of the biggest salmon derbies they used to have in this area, the Vancouver Sun Free Salmon Derby. It was purely a promotion for the Vancouver Sun and we were sensitive to the criticisms of the wildlife organizations of which I was also a member. We tried to have a derby that wouldn't have people go out to just fish for a prize, in other words, turning fish into a ticket in a lottery. The kind of derby we had brought so many people into the area that fishing went right off. Success was very low, and so we rationalized that we weren't doing much harm. But I do think season-long derbies provide very little incentive to make people fish just for the sake of winning a prize. They sort of add interest to the season long sport, such as the Times Columnist Derby in Victoria. I think that mild speculation in fishing really serves to keep people outdoors, and I don't think we should outright condemn every kind of fishing derby, as the Wildlife Federation tends to do, just because there is a fish involved. Generally, I think the trade-offs are worth it.

Ron Johnson: Saskatchewan has a sort of a semi-official policy saying that we will not support derbies but we won't obstruct any that are being carried out by private people. Our objection to them is that they focus on the large fish concept and we had to fight our tourism people on that about ten years ago. We got them to quit advertising the big fish in Saskatchewan simply because people tend to throw little guys back and keep bigger and bigger ones and there is a lot of waste of fish.

Bob Martin: I have been impressed at this conference by the rapid rate in which the word sport fisheries is being replaced by recreational fisheries. It was quite apparent in the Minister's speech. We see National Marine Fisheries

Service talking about recreational fisheries policy. We find the Sport Fishing Institute's document almost completely in terms of recreational fisheries. In our four papers we stuck to the word recreational as something that is more descriptive of our broad interest. We are interested in sport fisheries, in part, but we are also interested in the non-consumptive use of resources. It seems to me that as time goes on, it is the broader concept of recreational fisheries that is going to be the real focus of attention. I would favour that in terms of direction that our real interest is in recreational fisheries rather than sport fisheries.

Archie Tuomi: The U.S. Department of the Interior national surveys cover the broad spectrum of "fishing, hunting and wildlife-associated recreation". Less then a decade ago, we started finding out what sport fishermen are doing, and we are lucky that we were able to get the focus on that started and going. The future will have to take other aspects. We were lucky to cover the one aspect, which I think is the foundation of our interest here.

John Clarke: I tend to agree with Bob Martin. There are some serious connotations about sportfishing. The Inuit in the eastern Arctic disdain the word sportfishing. They don't like sport fishermen, they feel they are people who come and, in their words, play with the fish, humiliate them, and then let them go again. I think there are a large number of people in Canada in this so-called sport fishery for whom the fish they take home are an important thing to them. They have fish on the table, maybe twice or maybe three times a week, and it is an important thing to them. That should probably be called subsistence fishing, or something of that nature. The word recreational isn't going to be attacked the same way as sport fishing. I see a lot of problems with catch and release. There are many people who are going to say that, in the end, catching and releasing fish just for the sake of catching them is a barbaric act. I believe in the '90's bodies like this are going to have to wrestle with that issue.

Roger Liddle: My remarks are aimed mainly at the concept of recreational and sport fishing. I don't know how the other provinces deal with the situation, but I know we have a hard time in Ontario with the attitude of general residents to fishing. It's not so much in the southern part of Ontario, although I do have my suspicions there. But in northern Ontario, one of the big problems we have is the attitude of the resident toward angling and keeping fish. He seems to have a feeling that the supply of sport fish is unending, that he can go out and can take them in any quantity he wants. He consistently disregards limits and I know of dozens and dozens of cases where local residents will go out and take their full limit. They don't take more in one single outing because they are afraid of being caught and being punished for it. But they will take those fish home, stash them in their freezer and go out again. And we see it all over northern Ontario, and I would strongly suspect that we have that same attitude all across Canada. I think that if we want to try to conserve our fish, and have it as a recreational or sport fisheries, we have to start changing the attitude of the angler. It gets right down to the basics. Why are they fishing? Is it for recreation or is it for subsistence? And one other comment, directed towards John Clarke. He says that he has some hang-ups with catch-and-release. I don't have those hang-ups at all. I know that when I was in the tourism industry, running my fishing lodges, those people would go out and fish for the day. They would catch fish and they would release fish and I would be the last one to suggest that they

quit fishing. And if they are going to have recreational fishing, and continue to fish, obviously there are going to be fish that are caught and released. So the whole concept of catch-and-release has been with us since the start of fishing and I don't think that it is something that we would want to discourage at all. I would hate to think that we should continue on with an attitude of catching fish and keeping them. I think it is a poor attitude.

Ed Mankelow: I guess it is a matter of semantics whether you are talking sport fishing or whether you are talking recreational fishing. I kind of prefer to move towards recreational fishing. I know that I, and I suspect a large number of people, when they leave home to go on vacation with their families, they are not going fishing, they are going on vacation. But on their vacation, they fish during their recreation. And I would suspect that there are a lot of people who do this. As far as the catch-and-release is concerned, the gentleman opposite says he has no hang-up on it, and I don't really have any hang up on it, but I will say this. If I wanted to attack the sport fishing industry, or fishing community, the first people I would look for would be the catch-and-release guys who don't legitimately want to take their fish home and eat, but want to torture a fish on the end of a line and then let it go. And whether you have no hang-up or not, or whether I have no hang-up, there are a hell of a lot of people out there who will have a hang-up on it.

Ken Cox: When you see something come out in a federal government document talking about sport or recreation, there is just no difference between the two. In fact, if you notice the publications that used to come out of the Recreational Fisheries Branch, sport fishing was used in all the titles. To us, and we've talked about it, whether we use sport or recreation is just one of those things. We decided to just forget about it, because we didn't feel the difference was important. It was the same thing about 3 years ago when the federal government declared that Websters rather than the Oxford Dictionary was the official dictionary of Canada. You try and convince people to change the spelling of licence. It's just a point of information. If you wish to change it to recreation, that is fine, but in federal government publications, there is no distinction between the two.

Howard Paish: In looking into the '90's, we can take a look at the way in which the attitudes towards field sports, outdoor sports have evolved in Britain. It started out with an outfit called the League Against Blood Sports. They became an extremely powerful political lobby to stop otter hunting initially. I compare that somewhat to Greenpeace's success in getting a lot of support from a lot of us in their whale campaigns. The next step by the British League of Field Sports, it might be twenty odd years ago, was fox hunting which was based as much as anything, on a class argument. The rich do it, the poor don't, etc. More recently, in the last three or four years, we've seen a very concerted campaign of that type surface in the last general election in Britain.

Ron Thomas: Howard's comment is rather interesting. Last week in a Victoria newspaper there was a story from England about the group that Howard is talking about. That group had gone to the length of fabricating very official looking signs which say "fish are contaminated, do not eat", and "closed to fishing". The most diabolical one was that they had a number of ways to discourage people from fishing. One of them is that an angler by himself often responds positively to a nudge in the back. And you know, that's kind of getting a bit ruthless.

Archie Tuomi: I don't think we want to pursue these matters much further because these are things that we are going to have to keep continually in mind with regard to the future. Certainly, we started using sport and recreational fisheries interchangeably as a matter of convenience for some of the reasons Lee Straight indicated. And certainly, we are going to have to look at implications of what is coming down the line. We've already indicated the capacity to think about it and to progressively change in keeping with what is appropriate at the time. I'm rather amazed, if I can take a little liberty here, that some of the ladies here have not raised the sexist connotation of sport fisherman. As a writer on the subject, sometimes it is difficult to write about the sport fisherman, and then later on in the paragraph, have to revert to he or she. This is one of the reasons we use angler rather than sport fisherman, but there is problems with that too. So, I think it is a mark of forbearance on the part of the ladies here that the issue hasn't been raised.

Rod Munford: I would just like to point out to you, Mr. Chairman, the International Parliamentary Committee has now decided that "Chairman" will stand. There will be Madam Chairman or Mr. Chairman.

Ron Johnson: To get back to catch-and-release, just before I left, the Society for the Prevention of Cruelty to Animals stopped a goldfish gobbling contest at the Kelsy Institute in Saskatoon. That hit the papers, so I think there is a problem. The other thing I want to bring up is important. We need somebody to produce overview papers on many of these management things, and this is one of them. I have never been much in favour of catch-and-release but I have never seen the arguments put down both scientifically and sociologically. I think that this is one of the things that the federal government can do for us in the sport fishing context, specifically to produce these kind of overview papers on catch-on-release, on trophy fishing, etc., etc.

Archie Tuomi: Thank you Ron. I think it is an excellent suggestion, however, I wouldn't want it confined to government, least of all to federal government. But the idea of overview papers on these subjects is an excellent one.

Art Smith: In response to Ron, I think there is a lot of stuff in published form that we could take advantage of. And on the sports fishermen or recreational fisheries, we have to define what sports is, what recreation is, what are we trying to do, then maybe, we should step back a bit and consider what we are doing. Are we offering recreational opportunities? If we are, we can call it a recreational fishery. What would you call a smelt fishery through the ice where you are using a little hand spear. Is that sportfishing or a recreational opportunity?

Doug Brown: I just want to contribute a few thoughts from our perspective on this business of boycotts. There appears to be a growing movement among urbanized peoples around the world, especially in Europe and North American, that to kill something in nature is a bad thing. I think it is fair to say that when it comes to seals, the people in Newfoundland certainly stuck our heads in the sand until it was too late. I think federal officials did as well. I don't think anyone took it seriously until it was too late, and the industry was ruined for the people who depended on it for part of their livelihood. It's very difficult to know where to start, because of the kinds

of resources these people have. It's difficult, for instance, when fisheries biologists are called liars by people with as much prominence as Farley Mowat. My advice would be, don't be like the sealers who only created the Canadian Sealer Foundation last year. So I think the whole entire fur industry is next in Canada, and that is a multi-million dollar industry. Sport fisheries is next, and every kind of wild harvest is next. Believe me it is a very big movement, and it isn't going to go away overnight. I would hope that governments and people who have respect for taking conservationist positions, like the Canadian Wildlife Federation, and so on, will be in the forefront to explain that wild harvest is not necessarily a bad thing, and that there are positive social and environmental values related to it. I'll just sound the alarm that it happened to us so quickly that we weren't really prepared for it. I just hope that it doesn't happen to other sectors.

Archie Tuomi: The handwriting has been on the wall for quite a while and your contribution, particularly, brings it into a perspective of immediacy.

Ed Mankelow: What the gentleman from Newfoundland said was right on. But something he didn't say is really important, and that is the fact that, first of all, you're dealing with people who can call you a liar and don't have to be taken to task. They try to make you prove what you are saying but they don't have to prove anything they say. They've got the media. The other thing too, is one of the problems with the Newfoundland seal fisheries, as far as I understand it, is that fact that you figured you could beat them with statistics and logic, and you did. But they weren't fighting you with statistics and logic. They were fighting you with emotion, and they will beat you very time, because, as I say, they have the media behind them.

WORKING GROUP REPORT ON THE CONFERENCE SUMMARY

Dick Roberts
Chairman, Volunteer Conference Work Group

Your volunteer work group has prepared two documents. One is a press release covering this weeks meeting and the second is a conference summary and both are open for discussion.

CONFERENCE NEWS RELEASE (Friday, Feb. 17, 1984)

VANCOUVER -- The highlight of the fourth Canadian Sport Fisheries Conference, held in Vancouver this week, was an address by the Honourable Pierre De Bané, Minister of Fisheries and Oceans. He stated that "By any reasonable assessment, sport fishing is a major economic asset, an indispensable centerpiece in Canada's national recreational and tourism industries. It is my opinion that the time has come to manage it and develop it to its full economic and social potential."

The conference, called by DFO was attended by all sport fish management agencies in Canada, as well as representatives of organized anglers and industry associations supporting Canada's sport fisheries.

The theme of the conference was "Getting Ready for the 1990's" and its main objective was to examine goals, strategies and programs to take advantage of the recreational and economic potential of Canada's marine and freshwater fisheries resources.

All participants recognized the importance of sport fisheries in presenting statements of their goals, objectives and strategies.

The conference agreed on the following five major points:

- The overriding importance of conservation. As Mr. De Bané said, "Conservation is the main challenge. It is a challenge to all fishermen - sport, Indian and commercial - and all fishermen will have to share in meeting that challenge."

- The need to pursue more effectively the restoration and development of habitat and depressed fish stocks.

- The need for an explicit policy for fish allocation among user groups.

- The importance of improved consultation between management agencies, sport fishermen and sport fish industries.

- The need for effective federal/provincial/territorial co-operation.

Non-governmental organizations stated their intention to present more effectively their views and concerns on the management and development of Canada's sport fisheries, both nationally and provincially.

The conference established, as an immediate priority, the development and conduct of another survey of sport fishing in Canada in 1985. A similar survey in 1980 revealed that six million anglers took part in Canada's sport fishery, one million of whom were tourists from outside the country. Sport fishermen spend $1.1 billion on consumer goods related to the fishery, and invested another $0.5 billion on durable goods such as boats and motors. They caught 46,000 tonnes of fish, accounting for almost 40 percent of all finfish both caught and consumed in Canada.

The Conference endorsed the need to establish general guidelines for the management of Canada's recreational fisheries, recognizing the diversity and special characteristics of individual fisheries across the country. It agreed to establish a working party to develop guidelines and make recommendations for the next conference, to be held within year.

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DISCUSSION OF THE CONFERENCE OVERVIEW

Archie Tuomi: Without attempting to summarize the viewpoints expressed on the subject, our discussion has reasonably taken care of the immediate problem of the press release. Now, we can proceed to discuss the conference overview which is important but not urgent. You may also wish to raise relevant matters summarizing the Conference.

Howard Paish: One thing that has been identified is inadequate cooperation and coordination of fisheries management programs between federal and provincial governments. I don't see effective federal-provincial co-operation until we seriously start thinking about rewriting the Fisheries Act. It is not an effective piece of legislation to manage fish, period.

Archie Tuomi: There are all sorts of imperfections in the Fisheries Act, and it is admittedly an imperfect framework. At the same time, it need not serve as a handicap if we can, through other means, come to an agreement in specific areas.

Howard Paish: I realize that, and sure, we can have a whole raft of gentlemen's agreements, but we don't live forever. If we give this thing political priority, we can generate the rationale for changes in the Act to make it far more acceptable. I think it is a major obstacle, personally.

Archie Tuomi: Some of the agreements that are being carved out are being written into intergovernmental agreements and they are more than gentlemen's agreements. That is not to mean that they are going to survive. A lot of things don't survive in this world. Anyway, your point is well taken.

Wilf Carter: A couple of brief comments. The first is on the draft overview where it mentions overfishing of sport fish species. It is more than that. It's over harvesting generally and I would not like to exclude some of the other species that, in fact, are being very severely over harvested. The other problem has been made repeatedly through the conference. It was in Art Holder's paper, where he said that past channels of communication have been inadequate to promote understanding of effective mechanisms for public involvement in decision making. That is a major problem, this whole business of the inadequate mechanisms for communication between various levels of government and the user groups, and the almost complete absence of effective mechanisms for public involvement in the whole process.

Ron Johnson: I would like to get back to what Howard Paish was talking about, the Fisheries Act being an imperfect vehicle. We have to use it but unfortunately we can't. I wouldn't want DFO to go away from this conference saying to themselves, "we'll carry the message that some of the provinces are unhappy about the effectiveness with which we can use the legislation". I want them to go away saying "we have to do something about the effectiveness with which the provinces can use this legislation". You could read that into some of the statements that are in this draft overview, but I think it so important that it should have a special status, emphasizing that we need some vehicle for getting our regulations done. Now, it's bandaid I know, and we really need to do what Howard is saying, go back and change the cotton-picking act, but in the meantime we need to at least get some vehicle for getting regulations passed.

Archie Tuomi: I see no problem in something like that. Touching the Act is one thing, but making sure that it works better, and the way it should work, is something that certainly can be taken back, to the extent I am in a position to do so.

Art Holder: Well, from a real practical point of view, we are having very much the same problems, to the point of it being ridiculous. We have been about 18 months, I guess, trying to get through our last set of regulations. It is a fundamental problem. I recognize that with the Fisheries Act you are really getting back to constitutional discussions that are bigger than we are aware of. I just wonder if there is any consensus around the table, from the provincial governments at least, that a committee be struck to examine the issue of reopening the Act and/or it's constitutional implications?

Don Toews: I think I recognize the concern, that you just don't go and open up the Fisheries Act. But the theme of our conference is strategies for the 1990's. If we agree that we have problems with the Fisheries Act, that is a constraint to addressing the problems of management in Canada as a whole, and we have all fourteen management agencies in Canada represented here, then, I think it would be very very reasonable, as a long term strategy, to look at the Fisheries Act and strive to make those changes that are necessary to basically improve management of fisheries in Canada. I think it is essential.

Archie Tuomi: I would note that what you are doing is making recommendations. They are only recommendations, but this is the place to make them because everything is subject to concurrence and consideration, in any event, by all governments. So, it is most appropriate that if you feel strongly enough about something, and there is a consensus, then it should be identified as such.

Doug Brown: Just a word of advice. If you are going to address this question, it should be carefully couched as a review of the Fisheries Act in terms of its effectiveness as legislation covering the joint responsibilities of agencies for fish habitat and fisheries management. If you mention constitutional jurisdiction there, forget it. Governments won't touch that aspect with a ten foot pole right now.

Archie Tuomi: Based on long recollections about it, this issue has been raised as a perennial priority matter on about a three year cycle ever since I can remember. So I won't hold out tremendous expectations about it but that does not preclude it being recommended.

Bob Martin: I wonder if we're perhaps overstepping some of the terms of reference we have in dealing with sport fish issues. I would suggest that if we are going to do something that is going to be effective, we've got to recognize that there must be a better priority for the sport fishery, and this includes passage of the regulations. Specifically, they shouldn't be dumped back every time a commercial fishery regulation has to be passed or something else. I agree if all the participants are experiencing similar problems, then that type of problem should be identified here and a solution suggested.

Ron Thomas: While I support Art Holder's suggestion that a very careful look be taken at the Act, I also see difficulties. If the Act were opened up, there is the danger that the habitat protection clauses in the Act would be the first thing to go. I also suspect that there isn't a jurisdiction in this country

that would be successful in getting anything close to that kind of habitat protection incorporated into provincial legislation. So, I think there are other ways to get regulations passed than to rewrite the Act.

Howard Paish: I agree totally with the comments made. But I still suggest that if we are looking into the '90's, we've got to have an act that reflects the 1990's, not the 1890's as our vehicle for carrying them out.

Art Holder: I just wanted to reiterate my proposal that a policy paper on the pros and cons of it be undertaken, not that we necessarily dive into it. I've been totally frustrated because there is no forum in which really to discuss this. I'm fully cognizant of the strength that lies in the Fisheries Act. But at the same time I also know that we have been pretty ineffective in Ontario in really applying the most stringent kinds of habitat protection. Maybe the solution is that we do a little bit of tinkering. And maybe the solution is that we have to look at it in a more fundamental way. But I would like to have a policy report on the whole matter to this group if we are going to meet again in nine months or so.

Archie Tuomi: With respect to the lack of a forum, this Conference was designed to look into the future. That does not necessarily mean that success is guaranteed through use of this forum, but I see nothing wrong with your recommendation. Perhaps you and your like-minded colleagues can give us the wording of the recommendation to have this whole matter studied and reported on at the next conference.

Ron Johnson: I would like clarifiction. We started off this conference way back to develop national policy on recreational or sport fisheries. I'm not sure what this conference overview is supposed to do. Could you explain?

Archie Tuomi: I'll take a stab at it, and anyone can feel free to correct me on it. Working on the intergovernmental committee paper, we drew up the spreadsheet. It gave the big picture alright, but it was also complex. Yet, it could have been quite easily taken a step further. Any "bureaucrat", public or private, could translate that spreadsheet into three pages of prose quite easily. But even in our little intergovernmental group, we all held back from trying to put it into a final form, or a seemingly final form. It would have been premature. I think we had to have this session to find out more about what is going on, and I'm particularly appreciative that the decision was individually and collectively taken here, that we are not going to try and translate that policy into prose form here. I think it would be premature. I think we have to do a lot more homework, and then be prepared for the next conference within the year, to come up with and circulate beforehand, both the prose and the statement that will spell out what we initially set out to do. So I see this conference overview, and this conference, as major stepping stones to the next conference where, as a goal, we should have the formulation of - and I don't want to use the word national - Canadian sport fishery policy. The next conference is the place where I think we can try and put it into more specific terms. But I don't think that any of us were really ready to do it and I don't think it would have been appropriate to do it here. So, we are setting it off a year which, considering how far we have come, is still a remarkably short time. That's my reading of it, so feel free to comment because it is only a personal viewpoint.

Ron Johnson: No, I think that clears up what we are talking about here.

John Clarke: In the overview where it says "fisheries resources must be allocated on a principle of best use decided by a mix of local (or regional) social and economic factors". I think that you are making it political and debatable with that "mix", whereas if you were to say fisheries resources must be allocated on a principle of best economic use decided by economic factors, you make it a simple statement. You thereby explain to the public that it has to be an economic thing which gives them a return. It also brings in the possibility of pricing of the resource. The way it is right now, it's an Alice in Wonderland situation which cannot be resolved.

Howard Paish: I find it unusual to disagree with the previous speaker. It is not just an economic resource. There are a lot of values there that are social values that in the long run may, in a crazy kind of a way, become economic values. I certainly don't think we should go with that. There has to be some social value there too.

John Clarke: If I may, I think it is an absolute fact that if you look after the economic situation, the social factors will well be looked after.

Don Toews: I want to speak on the overview in a general sense. I think the number one problem is that habitat destruction and deterioration is eroding Canada's fisheries foundation. That is one of the major things that can come out of this conference and I think it should be identified as the number one overall issue. I also think it's not just a fisheries management problem. It affects other users, and any solution is going to have to not only involve the public but the other agencies that are impacting the fisheries resource at the present time. While fisheries agencies should take a lead role in addressing this problem, we also need new sources of funding. So, basically three things: I think we need comprehensive solutions, fisheries management agencies should take the lead, and we need new sources of funding.

Roger Liddle: There are two items that I wish to comment on. In the draft overview, we talked about maximum contribution to human welfare and national well being. That word welfare always scares me and I am wondering if we should perhaps just say human and national well being. The second point is about maintaining all native and desirable introduced species. There is no mention in there about rehabilitation and perhaps we could say "maintaining and where necessary rehabilitating all native and desirable species".

Ron Thomas: In lieu of habitat destruction, I think in many cases we are talking about habitat alterations. We have got habitat coming out of our ears that we can't get fish into and that is a management problem, that is not a habitat problem.

Ken Brynaert: I have three comments. In the first sentence, I would really feel more comfortable if we took "development" out. I think we made our point that development is not a common goal that we want to see. And second, under the heading of Overall Goal, I have a hang-up with the word "scientific", and would suggest ending that statement with "recreational and ecological benefits

for present and future generations by Canadians". Third, under common issues we recommend changing the last item from over-harvesting of sport fish species to over-exploitation of fisheries resources. Finally, I recognize that after the thirteen or fourteen agencies said their thing, all in different ways, most of them had said roughly the same thing, so the statement encompasses what everyone had said. In short, it is not the goal of the Conference, but rather a draft suggested goal for fisheries management in Canada.

CONFERENCE OVERVIEW:
(As revised 21/3/84)

Certain common goals, issues and management strategies were identified by conference representatives on the conservation and use of Canada's recreational fisheries resources to enable optimum contribution to human and national well-being.

Overall Goal

The goal of fisheries management is to produce maximum economic, cultural, recreational and ecological benefits for present and future generations of Canadians by:

a) maintaining and rehabilitating where appropriate native and desirable introduced species of fish at optimum levels of distribution, abundance and health, and protecting or enhancing essential fish habitat; and

b) providing an equitable distribution of opportunities for a wide variety of all socially acceptable uses of fish.

Common Issues (The Problems)

Government, industry, and user groups made submissions on their respective goals and strategies concerning management of sport fisheries. Common problems include:

1. habitat alteration (including acid rain) is eroding Canada's fisheries foundation;

2. over-exploitation of fisheries resources;

3. declining opportunities for sport fishing;

4. social and economic values and importance of sport fishing poorly understood;

5. funding for management and technological advance is inadequate to halt or reverse current declines in habitat and fish stocks;

6. ineffective institutional arrangements for co-operation and co-ordination of fisheries management programs between federal and provincial governments;

7. inappropriate allocation of fish resources considering changed socio-economic factors;

8. sport fisheries user and industry groups are fragmented and uncoordinated;

9. inadequate mechanism for public involvement in the decision making process involving sport fisheries; and

10. there are major management problems arising from the enactment and administration of fisheries regulations under the authority of the federal Fisheries Act.

Common Strategies (The Solutions)

Immediate, comprehensive action is required to address issues and realize Canada-wide goals, including:

1. understanding and agreement by all agencies on Canadian habitat statutes and policy;

2. international and naticnal agreement that fish stocks must be maintained, restored and kept under stringently controlled harvest to ensure optimum spawning escapement;

3. necessity of formal, effective federal/provincial and federal/territorial co-operation in management of fish and habitat;

4. requirement for an "umbrella" user-industry group to assist governments in the development of policy and strategies on best uses of fisheries habitat and fish; also to help inform the public of our fish habitat resources, their utilization and importance;

5. there is a fundamental requirement to continue research and apply available scientific knowledge to management and rehabilitation of fish resources;

6. fish resources must be allocated on a principal of "best-use" decided by a mix of local (or regional) social and economic factors;

7. immediate requirement to explore and develop alternative funding sources to augment management and research;

8. requirement for DFO to give highest priority and new commitment to Canadian sport fisheries research and management;

9. requirement for a 1985 Canada-wide sport fishing survey to keep pace with and manage changing demand-supply factors; continuance of such surveys every five years;

10. undertake immediate action to resolve commercial-sport economic valuation differences; and

11. establishment of a joint federal/provincial/territorial working committee to report to the next conference on the impediments to efficient management of fish stocks and their habitat arising from the federal Fisheries Act and the administration of the regulations made under authority of that Act.

CONCLUDING STATEMENTS AND REMARKS

Ken Brynaert: I would like to read the following statement into the record as our concluding contribution to this conference. "The Canadian Wildlife Federation feels there is a need to develop a national focus for the concerns of users of the recreational fisheries resources throughout Canada. We feel that this focal point needs to be outside of governments though not meant to exclude government people. CWF sees a need for an ongoing organization to provide this focus and is willing to work with other interest groups to develop some mechanism to make it happen."

Roger Liddle: For the record, I would like to indicate that the tourism industry, as represented by myself here on behalf of the other associations, would like to go along with what Ken Brynaert has said.

John Clarke: Manitoba Lodge and Outfitters Association would support that too.

Art Holder: I have a proposed wording here regarding the Fisheries Act, as follows: "The conference endorses a resolution that a joint federal-provincial working committee be established to review the constraints within the Fisheries Act and its administration to the efficient management of fish stocks and their supporting habitat and that this working committee present a report at the next conference".

Bob Martin: I just want to make sure we understand the situation on publication of proceedings of this conference. I take it that you are inviting all the people that have given papers to turn in edited copies of the papers to you and that the hope is that all of these papers will be published in a volume of proceedings of this conference. Is that correct?

Archie Tuomi: There is a definite commitment and budget set aside for publication of the proceedings of this conference and the major documents.

Now, a few concluding remarks. Speaking on behalf of the Minister of Fisheries and Oceans, sincere appreciation is expressed to everyone here with respect to the contribution they have made to this conference and to the future of Canada's sport fisheries. Both Victor Rabinovitch and Gary Vernon express their thanks, and their regrets at the same time, that they were not able to be here nearly to the extent that they would have wished. To our colleagues from Norway and the United States, I would extend on behalf of the conference and the Department, our appreciation for your contributions. Many of us started off not knowing each other, yet we demonstrated that we can work together and that we are going to work together toward the future. While we have coalesced as an industry, we are an industry now in the fuller sense of the word, and for Canada's sport fisheries that's augurs well for the 1990's.

Wilf Carter: I have participated in several of these meetings and each one of them, I have found, has made considerable progress over the previous one. There is almost a plea in what I am saying to people who are in government, to bounce your ideas more frequently against the user groups. The people for whom you are managing the resource can be your best friends. Frequently, I think you are going to find that we can identify flaws, and in a constructive way,

help to make what you are trying to do better. Speaking personally, but I hope reflecting the views of many of the people who are in the room and those who are not here, may I express appreciation for being invited to this meeting to contribute in whatever modest way possible to the discussions that have taken place.

Archie Tuomi: Thank you very kindly, ladies and gentlemen. The conference is adjourned until next year.

APPENDIX 1

BACKGROUND ON THE CANADIAN SPORT FISHERIES CONFERENCES

The Canadian Sport Fisheries Conferences, which had their origin in 1970, were preceded by a number of other initiatives both in Ottawa and elsewhere:

- **The 1964 Federal-Provincial Conference on Fisheries Development** focussed almost entirely on the commercial fisheries and was labelled as "the first conference of its kind in Canadian history". Despite its orientation, this Conference recognized "the tremendous and increasing importance of sport fishing."

- **The 1965 Symposium on the Economic Aspects of Sportfishing** followed and brought together fisheries managers and economists from Canada and the United States who identified but did not resolve key issues arising from (a) the lack of agreement on the economic valuation of sport fisheries, and (b) the related absence of any comprehensive statistics on the dimensions and dynamics of Canada's sport fisheries.

- **The 1970 Sport Fisheries Statistics and Valuation Workshop** was convened to determine provincial government views and support for the development of comprehensive information on Canada's sport fisheries. The federal and provincial representatives in attendance agreed that: (a) the ultimate goal was better management and a better understanding of Canada's sport fisheries by everyone, (b) that the first priority was the development of directly-comparable statistics on the size, value, and importance of all of Canada's sport fisheries, (c) second priority was given to carrying out research on the value of sport fisheries so that they could be "legitimatized on the basis of a firm foundation of information", (d) that the provinces expected, and would support, federal leadership in these two priority program areas of endeavour, and (e) that the then Department of Fisheries and Forestry should provide a central "clearing house" service on relevant sport fisheries information and studies.

- **The 1972 Sport Fisheries Statistics and Valuation Workshop in Victoria, B.C.** Although deputy minister level correspondence had ratified the development of cooperative data development programs as agreed to in 1970, further consideration took place at Victoria regarding both the scope of the data and how they could best be developed.

- **The 1974 Sport Fisheries Statistics and Evaluation Workshop in Quebec City.** This workshop took the collective planning process a major step further by identifying the need for some common goals to give direction to data development. Overseas participants came from Ireland, Sweden, the Foyle Fisheries Commission and FAO's European Inland Fisheries Advisory Commission.

- **The 1976 Canadian Sport Fisheries Conference in Toronto.** Three important developments occurred: (a) the preliminary results of the nationally-coordinated 1975 Survey of Sport Fishing in Canada were reviewed (the survey itself was cooperatively planned, funded and

conducted by all 14 of Canada's sport fisheries licensing and management agencies), (b) a paper was presented, as suggested at the 1974 Conference in Quebec, on "Indicative Canadian Sport Fisheries Goals and Programs" to provide guidance to data development, and (c) organized anglers participated for the first time, setting the stage for all other sectors to be represented at future conferences.

- **The 1978 C.S.F. Conference in Fredericton, N.B.** With all major sectors in attendance, this Conference was, in essence, the first overall Canadian sport fish industry forum. Major matters addressed included a final review of the 1975 Survey results and the laying of plans for the 1980 survey and related endeavours.

- **The 1981 C.S.F. Conference in Calgary, Alberta.** Major emphasis was given to acid rain, specifically, the dimensions of the threat posed and the avenues open for collective consideration and action. Preliminary results of the nationally-coordinated 1980 Survey of Sportfishing in Canada were presented (less than six months after the return of the last of the approximately 80,000 questionnaires). Economists discussing the 1980 survey unanimously agreed that gross expenditures do not represent the "value" of sport fisheries. Agreement was reached that a report should be prepared for the next Conference on the practicality of a sport fisheries tourism marketing strategy for Canada. The Assistant Deputy Minister, of the Department of Fisheries and Oceans for Fisheries Economic Development and Marketing, promised to try and restore some of the previously provided federal sport fisheries services e.g. the management information "clearing house" service ("MICS"). And in a speech, the Deputy Minister of Fisheries and Oceans discussed the pros and cons of native people acquiring the prerogative of using their catch as they want from community, band-based fisheries.

APPENDIX 2

1984 Canadian Sport Fisheries Conference

Sheraton-Landmark Hotel, Vancouver, British Columbia
February 13-16, 1984

Monday, February 13

0800 - Registration

0900 - Welcome - Mr. B.E. Marr, Deputy Minister of Environment, B.C.

- Keynote Address - Dr. V. Rabinovitch, Assistant Deputy Minister, DFO

- Conference Process - Chairman, A.L.W. Tuomi

1000 - Surveys of Sportfishing in Canada: 1980 Results and 1985 Plans

1030 - Coffee

1050 - Non-Government Briefs and Submissions: B.C. Sport Fish Advisory Board; Can. Wildlife Federation; Northern Ont. Tourist Outfitters Assoc.; Atlantic Salmon Federation; Native Fisheries Owner Group; Sport Fishing Institute of B.C.; Man. Lodges & Outfitters Assoc.; Can. Sport Fishing Institute; Fly-in Sport Fishing Industry Assoc. of Canada.

1200 - Lunch

1330 - Continued

1500 - Coffee

1520-1730 - Continued

1830 - Reception/Dinner, and address by Hon. Pierre De Bané, Minister of Fisheries and Oceans.

Tuesday, February 14

0830 - Provincial Territorial & Federal Management Agency Goals & Programs D. Brown (Nfld.); B. Sabean (NS); A. Smith (PEI); W. Hooper (NB); C. Bernard (Que); A. Holder (Ont); D. Toews (Man); R. Johnson (Sask); E. Stenton (Alb); R. Thomas (B.C.); H. Paish (Yukon); C. Livingston (NWT); D. Roberts (DFO).

1030 - Coffee

1050 - Continued

1200 - Lunch

1330 - Draft Canadian Sport Fisheries Goals and Programs
W. Hooper; A. Holder; R. Thomas; A. Tuomi.

1415 - Non-Government Critique of Draft Canadian Sport Fisheries Goals and Program: K. Brynaert; R. Liddle; J. Gilbert; W. Carter, Native Owners Rep.; J. Clarke; Tom Davis.

1500 - Coffee

1520 - Continued

1645-1730 - Outside Perspectives on Sport Fisheries Goals & Programs Formulation. R. Hutton; G. Radonski.

1900 - Vancouver Aquarium: Devonian Project Report and "Bear-Pit" Reception.

Wednesday, February 15

0830 - Panel 1. Sport Fisheries Development Opportunities: T. O'Reilly, Chairman. G. Jefferson, W. Hooper, K. Cox, R. Johnson, S. Mehli

1030 - Coffee

1050 - Panel 2. Resource Use Conflicts: E. Stenton, Chairman. A. Barber; D. Toews; Ralph Shaw; K. Brynaert.

1200 - Lunch

1330 - Continued

1430 - Panel 3. Development and Potential of Native Owned Fisheries: G. Vernon, Chairman. L. Anderson; D. McLeod; W. Walling.

1500 - Coffee

1520 - Continued

1700-1730 - B.C. Sport Fishing Film, "A Fish For All Seasons".

1730-1900 - Informal Reception

Thursday, February 16

0830 - Summarization of Canadian Sport Fisheries Goals and Programs for the 1990's.

1030 - Coffee

1050-1200 - Conference Conclusions and Critique

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1400-1530 - Inter-governmental Post-Conference Review

APPENDIX 3

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